





FINAL DRAFT
San Mateo County
Alternative Routes for Traffic Incident (ARTI) Guide
April 2008







# FINAL DRAFT San Mateo County Alternate Routes for Traffic Incident (ARTI) Guide

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# **PREFACE**

The primary purpose of the *Alternate Routes for Traffic Incident* (ARTI) *Guide* document is to address the effects of non-recurring traffic congestion caused by major freeway incidents within San Mateo County. The focus of the document includes: 1) identifying, in advance, emergency alternate routes for use along selective freeway segments; 2) establishing traffic management response guidelines; and 3) facilitating interagency traffic management communication and coordination processes. The objective is to provide a resource to assist emergency responders in managing traffic that are diverted around the incident location and optimize traffic flow.

It is recognized that each traffic incident will have different characteristics that warrants unique responses but the common effects are the reduction of roadway capacity and probable increased traffic congestion resulting in major traffic delays. Through a coordinated effort, implementation of pre-defined alternate route(s) in response to major traffic incidents can minimize congestion, improve mobility, and enhance safety on local streets and freeways.

Facilitated by the City/County Association of Governments (C/CAG) and San Mateo County Transportation Authority, this document was developed through a cooperative effort between stakeholders including the California Highway Patrol (CHP), California Department of Transportation (Caltrans), local city public works departments, local police departments, local fire departments, the San Mateo County Office of Emergency Services (OES), and the Metropolitan Transportation Commission (MTC).

This document is intended to be a "resource guide" that provides a tool for emergency responders to use concurrently with existing agency procedures, practices, communication structure, and chain of command.





# **EXECUTIVE SUMMARY**

The City/County Association of Governments (C/CAG) and San Mateo County Transportation Authority have initiated an effort to develop Alternate Routes for San Mateo County freeway system. A Traffic Incident Management Committee (TIMC) was formed to provide oversight and guidance to the development of the project. The TIM is comprised of representatives of local cities (including public works, fire and police departments), California Department of Transportation (Caltrans), California Highway Patrol (CHP), Metropolitan Transportation Commission (MTC), San Francisco International Airport (SFO), County Office of Emergency Services (OES), and C/CAG. The Alternate Routes project focuses on predefining emergency alternate routes for use along freeways in instances of major traffic incidents on the freeway system in which traffic is diverting off the freeway and onto surface streets. In addition, the document establishes a traffic incident management response guide for implementation of preplanned alternate routes and identifying the traffic management communication and coordination process for agency response. The Alternate Routes for Traffic Incident (ARTI) Guide was developed in various workshops with the TIMC members and consists of agency response plans (showing the communications links and expected actions among the various agencies responsible for traffic incident management) and alternate routes that show the locations of incident locations, alternate routes, impacted jurisdictions, and existing and future infrastructure, including traffic signals, ramp meters, Changeable Message Signs (CMS), pantilt-zoom (PTZ) cameras, fixed intersection cameras and trailblazer signs. It serves as a handbook during incidents for the activation of traffic management equipment and personnel and focuses on increasing the coordination between the various San Mateo agencies during a freeway incident when it is desirable to direct traffic along alternate routes on other freeways or local This goal of this coordination is to enhance traffic management activities and reduce the impacts of incident congestion; no procedures in this Guide should be construed as replacing existing incident response procedures.

Several pages in the electronic version of this document include hyperlinks to allow the document to be used electronically. These links include the following:

- Linking the route number shown in the summary tables (organized by incident type and location) directly to the applicable emergency route;
- Linking the alternate routes with a list of emergency contacts for each jurisdiction and a list of items to consider when deploying an alternate route.

The document has been designed to be used and updated frequently. The maps have been developed using Geographical Information Systems (GIS) to make them easy to update as elements are installed. The maps currently show only those devices that exist. As more devices are installed, the GIS database will be updated so the maps will reflect the new equipment.

By proactively utilizing the *Alternate Routes for Traffic Incident Guide*, the stakeholders will have a tool that allows them to proactively manage surface street traffic during incidents and realize the full benefits of coordinated traffic management between public agencies and public safety.





# I. OVERVIEW

# A. Background

The San Mateo Traffic Incident Management Committee (TIMC), led by C/CAG and comprised of representatives of local cities (including public works, fire and police departments), Caltrans Operations and Traffic Management divisions, California Highway Patrol (CHP), Metropolitan Transportation Commission (MTC), San Francisco International Airport (SFO), County Office of Emergency Services (OES), and San Mateo County Transportation Authority (SMCTA), initiated an effort to develop emergency Alternate Routes for San Mateo County freeway system. This project focuses on developing traffic incident management response plans for preplanned alternate routes to be utilized in instances of major traffic incidents on the freeway system. The TIMC identified parallel arterial streets that are the best candidates as alternate routes for moving a higher demand of traffic during incidents and seek to contain and/or minimize the impacts of the diverted traffic onto the local street network. During such incidents and when it is desirable to direct traffic off the freeway and onto an alternate route on local streets, coordination between Caltrans, CHP, local agency public safety, and local agency public works staff is essential.

Several meetings and workshops were held to discuss the best approach to manage the incidents and to implement the alternate routes. C/CAG worked closely with the local agency public works and local public safety staff over meetings and workshops on this effort. Local agency cities, public works and public safety were involved in the route selection process based on hypothetical incidents. Their list of criteria and considerations were used as input in coming up with the alternate routes. Alternate routes were identified by the local agencies; these alternate routes typically use parallel arterial streets that are the best candidates for moving a higher demand of traffic during incidents. These routes have been chosen to manage and minimize the impacts of the diverted traffic onto the local street network.

After the routes were formulated, another workshop was held with public works and agencies, CHP and Caltrans to coordinate response on incidents. *Alternate Routes for Traffic Incident Guide* was introduced to the agencies which comprises of all the possible incidents and their respective alternate routes, and other elements to be deployed. It serves as a handbook during incidents for the deployment personnel.

# B. Purpose and Organization of the Guide

# Purpose

The purpose of the *Alternate Routes for Traffic Incident Guide* is to increase the coordination between CHP, Caltrans, local agency public safety, and local agency public works staff in San Mateo County during a freeway incident when it is desirable to direct traffic along alternate routes on other freeways or local streets. This goal of this coordination is to reduce the traffic management response time in incident management; no procedures in this Guide that should be construed as replacing existing incident response procedures. By proactively utilizing the *Alternate Routes for Traffic Incident Guide*, the stakeholders will have a tool that





allows them to proactively manage surface street traffic during incidents and realize the full benefits of coordinated traffic management between public agencies and public safety.

In general the Guide consists of <u>alternate routes</u> and <u>agency response plans</u>:

- Alternate Routes—These graphics indicate the pre-selected alternate route path as well as the elements that may be used to support the implementation of the alternate route for diverted traffic in response to specific incidents on freeways. Additional details on Alternate Route elements are included later in this section.
- **Agency Response Plans** Traffic Management Communications Diagram and Response Plan Matrix illustrate the communications links and list the actions between of various agencies responsible for traffic incident management in response to freeway incidents.

This Guide also suggests various performance measures that can be used following an incident to determine the effectiveness of the alternate route and agency implementation and response.

# **Organization**

This handbook is organized into four sections as follows:

- I. Overview—this section includes the purpose and background for the development of the Traffic Management approach in development of alternate routes, alternate route elements and traffic management communications flow diagram.
- II. Agency Coordination and Resources—this section includes details for agency communications and implementation plan resources for traffic management, including a communications flow diagram, traffic management response plan matrix, locations of freeway Changeable Message Signs (CMS) and emergency contact list.
- III. Performance Measures and Post-Performance Audit—this section describes the performance measures that could be used to determine the effectiveness of the alternate route and agency implementation and response for a post-performance audit following an incident. Suggested ways to record these performance measures are included.
- **IV. Alternate Routes**—this section contains the alternate routes along with summary tables for quick look up by incident type and incident location.

# C. Alternate Route Elements

Alternate Routes have been developed for the following freeway segments in San Mateo County:

- United States (US) 101—from San Francisco County line to Santa Clara County line
- Interstate 280 (I-280)—from San Francisco County line to State Route 92 (SR 92)
- Interstate 380 (I-380)—from US 101 to I-280
- SR-92—from Alameda County line (San Mateo Bridge) to I-280

Individual Alternate Routes have been developed in response to specific incident locations on the freeway system. Each Alternate Route consists of the alternate route for diverted traffic as well





as elements used to support its implementation. Although some of these elements do not currently exist along the alternate routes, they will be part of the overall system deployment at some time in the future. There are several planned and programmed ITS Projects along these alternative routes that will install some of these future elements. A list of traffic signal controllers upgrades and fixed cameras (for video detection) is included in Appendix A. Additional details for future projects can be found in a separate document: *Alternate Routes for San Mateo County Infrastructure Implementation Plan*.

**Alternate Route**—These typically consist of several components: freeway off-ramp, local street connector to the parallel arterial street, parallel arterial street, local street connector from the parallel arterial street and the freeway on-ramp and the freeway on-ramp.

**Traffic Signals and flush plans (future)**—Traffic signals assign right-of-way for traffic along local streets. Flush plans provide increased throughput capacity for local streets by adjusting the signal timing to provide extended green times along the parallel arterial street and the local street connectors to and from the freeway to move greater amounts of traffic. There are no flush plans currently developed or in use along the alternate routes. Future flush plans would need to include provisions for traffic flow between agencies and inter-agency traffic signal timing coordination. Upgrading traffic signal controllers (such as at the locations listed in Appendix A) can provide additional communication and coordination capabilities for implementing flush plans.

**On-Ramp Meters**—These meters adjust on-ramp flow rates upstream and downstream of the incident in response to freeway traffic. Flow rate for on-ramps upstream of the freeway incident would become more restrictive as congestion grows, while flow rate for on-ramps at the end of diversion routes would become less restrictive (or turned off), helping diverted traffic clear local streets more quickly. On-ramp metering based on local sensors is in the process of being implemented by Caltrans. Future features may include coordination with other traffic signals and central systems.

**Personnel Deployment**—Staff from local agencies (e.g., local police or public works) may need to provide traffic control and enforcement of diversion at key decision points along the alternate route and to direct local street traffic away from entering the impacted freeway section. Static detour signs may be used in conjunction with or in lieu of personnel deployment locations. Personnel deployment locations and staff type would be at discretion of local agency depending on situation.

**Freeway Changeable Message Signs**—These signs provide incident and route guidance information to traffic upstream from the incident. These are controlled by Caltrans and are an integral part of disseminating traffic and incident information to drivers on the freeway. A map showing relevant CMS signs for the County is included in Section II (Agency Coordination and Resources) for reference only. Message content is often determined "on-the-fly" by Caltrans operators based on the current needs.

**CCTV Cameras (future)**—Fixed and pan-tilt-zoom (PTZ) cameras may be used to monitor traffic flow and conditions at key locations along the alternate route to determine the severity of the diversion flow and the effectiveness of traffic management efforts. Fixed cameras are





typically installed at intersections (covering the major approaches), while the placement of PTZ cameras is more flexible. Video Detection Systems (such as at the locations listed in Appendix A) also use fixed cameras and there may be an opportunity to use these cameras without having to install a new separate camera.

Electronic trailblazer signs (future)—These signs would provide route guidance for the diverted freeway traffic along the alternate route as well as directing local street traffic away from entering the impacted freeway section. Installation of these devices may be used to replace the personnel deployment locations. Since alternate routes usually go through multiple jurisdictions, the future operations of these signs would need to include provisions for interagency traffic activation and coordination.



# II. AGENCY COORDINATION AND RESOURCES

This section includes the following items used for coordinating traffic incident management response actions between agencies:

- Traffic Management Communications Diagram—this graphic illustrates the communications flows between various agencies. The flow of timely information to responsible agencies is necessary to minimize traffic management response time.
- Traffic Management Response Plan Matrix—this matrix lists the various action items by agency in response to various levels of freeway incident severity
- Freeway Changeable Message Signs locations—this map provides an overview of the Caltrans Freeway CMS that may be used in response to a freeway incident in San Mateo County.
- Alternate Route Emergency Contact List—this list contains telephone numbers to be used
  for tactical coordination and communications between agencies during active incidents only.
  For communications on non-emergency (e.g. administrative) matters, general purpose
  numbers should be used.

# A. Traffic Management Diagram

Figure 1: Traffic Management Communications Diagram was created through a cooperative effort involving the various agencies involved in implementing the alternate routes in response to an incident on the freeway and managing diverted traffic on local streets. The key responding agencies include the CHP, Caltrans Transportation Management Center (TMC), 511, local agency police and local agency public works. In addition, the San Mateo County Sheriff, San Mateo County Office of Emergency Services (OES) and media may also play significant communication roles. The cooperative effort involved discussions with key members at TIMC meetings, as well as site visits and interviews with emergency responders. Based on this information, a preliminary traffic management communications diagram was developed and distributed. The diagram was revised based on feedback and then "tested" at a traffic incident management workshop held with hypothetical incidents. The diagram was revised again based on the workshop discussion. The diagram continues to be revised based on discussions at TIMC meetings following actual incidents in San Mateo County.

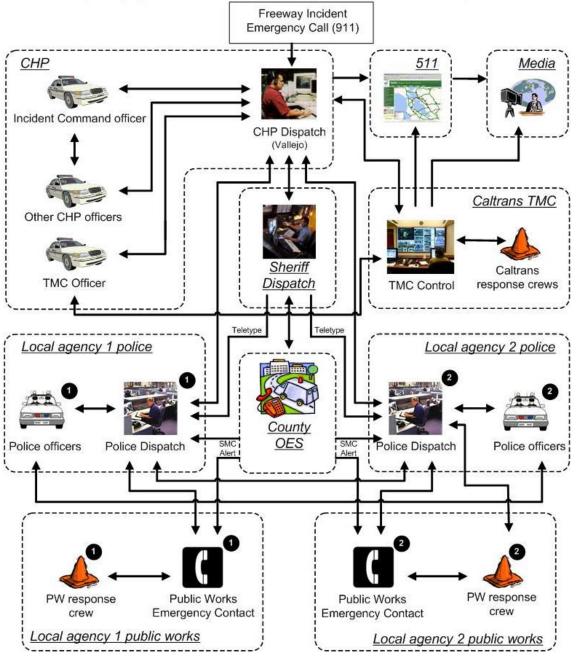




Figure 1: Traffic Management Communications Diagram

# **Traffic Management Communication Diagram**

(Managing diverted traffic from freeway incident on local streets)





# Freeway Traffic Coordination

The traffic management incident response begins with a freeway incident emergency call (usually 911) that is routed to CHP Dispatch. This emergency call contains the location of the incident and may include a preliminary estimate of the severity of the incident. Upon receiving the emergency call, the CHP Dispatch works with CHP field units to verify the incident. If the incident is severe enough, an Incident Command (IC) is established and the IC officer, supporting CHP officers and CHP Dispatch work together to manage the incident. CHP-to-CHP communications are done using radio.

CHP Dispatch also coordinates with Caltrans TMC Control by sharing the severity (number of lanes closed), expected duration of the incident, and other special considerations (e.g., lifting of HOV and/or truck restrictions, hazardous materials involvement and damage to freeway facilities requiring immediate action) using a mixture of messaging over the CAD system, email and telephone. A CHP officer is always on duty at the TMC to assist with coordination between Caltrans and CHP. Caltrans TMC operators may verify the incident and traffic conditions, posting messages on freeway Changeable Message Signs (CMS) or dispatching Caltrans response crews to close roadways, initiate emergency repair, etc). (Caltrans TMC also sends out pager alerts on new incidents and subsequent updates, but no local police agencies in San Mateo County currently receive them.)

511 receives information about incidents via a data feed from CHP Dispatch and Caltrans messaging and 511 staff presents this information in a format to be displayed to the public. The media receives information from 511 and the TMC (in addition to other sources).

### Local Streets Coordination

For coordinating traffic management on local streets, CHP Dispatch can also pass along information from the Incident Command officer to various local agency Police Dispatch regarding the presence of freeway incidents and traffic diversion (voluntarily or involuntarily) onto local streets. Although it does not appear to be common practice, it is possible for CHP Dispatch to also contact San Mateo County Sheriff Dispatch as a central coordinating agency to provide instructions and information to larger areas (e.g., multiple local agencies, regionally). The Sheriff dispatch can send instructions to all local police dispatches via teletype (e.g., close all northbound on-ramps on US 101 between University Avenue and Holly Street) and/or send information to local police, local public works and the public through the County Office of Emergency Services (OES) through the San Mateo County Alert (SMC Alert) system (e.g., All northbound lanes closed on US 101 at Holly Street). It should be noted that all local police dispatches are on the San Mateo County Alert system and that public works agencies are in the process of being added. Ultimately, all San Mateo County public works will be on the San Mateo County Alert system.

The local agency Police Dispatch coordinates with the local agency's police officers and public works staff to respond to and manage the diverted traffic on their streets. Local agency police-to-police communications is done over radio. Some local agency Police Dispatch have direct contact with public works response crews (either over cell phone/ Nextel or radio) while other





Police Dispatch may work with a Public Works coordinator (usually over cell phone/ Nextel). In situations where the diverted traffic may affect more than one local agency, local agency Police Dispatches may coordinate with each other over radio and the police officers of various local agencies can also communicate with each other directly over radio. (Currently, CHP officers do not typically communicate directly with local agency police officers over radio.)

# B. Traffic Management Response Plan

When an incident occurs, the first and foremost task is to judge the severity level of the accident. Depending on the severity level, the response is allocated. A Traffic Management Response Plan Matrix is created to facilitate the response to the incident.

The matrix includes further detail of the specific actions for various agencies in response to various severity levels for freeway incidents. In general, severity levels correspond to the percentage of the lanes blocked and expected duration of the roadway impacts. The severity level is a subjective call made by the CHP IC and CHP Dispatch.

Local agency efforts primarily consist of directing traffic and activating roadway/on-ramp closures. Local police would initially close off roadways/on-ramps following direction from CHP, with additional support provided by public works (e.g., installing roadway signs, barriers, portable changeable message signs) if the closure is anticipated to have a long duration. As future Alternate Route elements are deployed, public works may also adjust signal timing, deploy pre-determined interagency flush plans, and post information on arterial changeable message signs and monitor traffic conditions through CCTV locations.

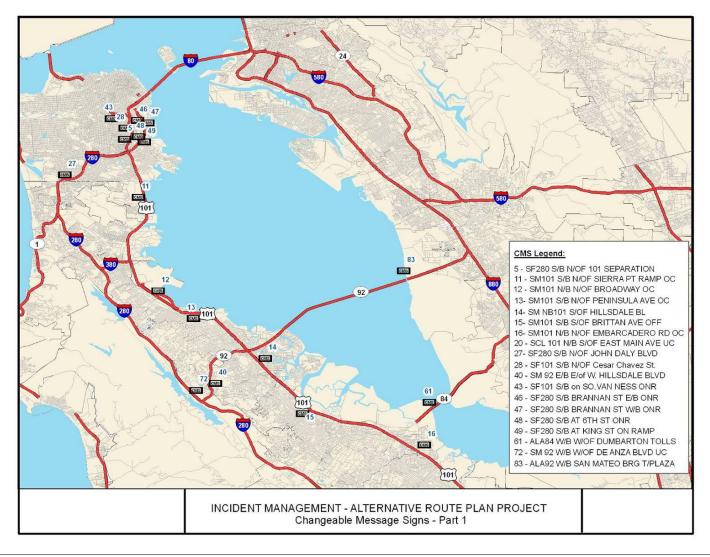


# **Traffic Management Response Plan Matrix**

		Traffic Management Actions to be Taken				
Level	Impact to Roadway	First Responder or Incident			Local Age	encies
		Commander	-	Caltrans	Public Works	Police
Minor (Level 1)	Impact to traveled roadway estimated to be less than 30 minutes with no lane blockage.	First responding unit reports severity of the incident to dispatch	<ul> <li>CHP dispatch reports information to Caltrans District 4 TMC</li> </ul>	<ul> <li>Caltrans TMC will:</li> <li>Monitor video and freeway conditions</li> <li>Update information to CHP</li> </ul>	No Action	- At the request of CHP, local police agencies may verify minor incidents. - Previously defined Emergency Response Plan
Intermediate (Level 2)	Impact to traveled roadway estimated to be greater than 30 minutes, but less than 2 hours with at least 50% lane blockages, but not a full closure of the roadway.	<ul> <li>First responding unit reports severity of the incident to dispatch</li> <li>CHP considers implementing alternate route</li> </ul>	<ul> <li>CHP dispatch         reports information         to Caltrans District         4 TMC         <ul> <li>Dispatch personnel              to the incident to              manage traffic</li> <li>Coordinate with              CHP at TMC</li> </ul> </li> </ul>	Caltrans TMC will: Monitor video and freeway conditions Update local agencies on traffic information	Manage traffic on local streets as required	- Manage traffic on local streets as required - Previously defined Emergency Response Plan
Major (Level 3)	Congestive impact to traveled roadway is estimated to be greater than 2 hours or roadway is fully closed in any single direction.  If the traffic incident is anticipated to last more than 24 hours, applicable procedures and devices set forth in Part 6 of the MUTCD should be used.	<ul> <li>First responding unit reports severity of the incident to dispatch</li> <li>CHP implements alternate route in consultation with local agencies</li> <li>Close and reopen freeway lanes and ramps</li> <li>Coordinate with local agencies to close and reopen local streets as needed</li> <li>Coordinate with local agency public works and law enforcement to inspect and implement alternate routes</li> </ul>	<ul> <li>CHP dispatch reports information to Caltrans District 4 TMC</li> <li>Dispatch personnel to the incident to manage traffic</li> <li>Coordinate with CHP at TMC</li> <li>Coordinate with Sheriff Dispatch (to notify multiple local agencies)</li> </ul>	Caltrans TMC will:  Monitor video and freeway conditions  Update local agencies on traffic information  Identify and activate freeway alternate routes	- Coordinate with CHP and Caltrans through local dispatch - Manage traffic on local streets as required - Provide alternate route information to Caltrans TMC - Coordinate with adjacent agencies along the alternate route	- Manage traffic on local streets as required - Previously defined Emergency Response Plan



# C. Freeway Changeable Message Signs





# III. PERFORMANCE MEASURES AND POST-PERFORMANCE AUDIT

This section describes the performance measures that could be used to determine the effectiveness of the alternate route and agency implementation and response during a post-performance audit (following an incident). Regular post-performance audits are recommended as a tool to improve the alternate route process and to prepare for the next major incident. As these performance measures are agreed upon and formalized, it is recommended that standardized post-performance audit forms be created and used. Various performance measures were discussed with input from the members of the San Mateo County TIMC and factors such as usefulness, ability to collect, and ease of process were considered. Below are the most recommended measures by stakeholders to assess the success of Alternate Route Program.

# A. Travel Time Performance

Increase in travel time is primary concern among the drivers whenever there is an incident on the freeway. Implementation of the alternate routes promises to reduce the delay by allowing traffic to bypass the incident using local arterials. Comparison of before and after travel-time surveys would indicate whether delay has been reduced due to the deployment of alternate routes during incidents.

Travel Time performance measures may seek to answer the following questions:

- What is the travel time on arterials (under normal conditions) before and after equipping the corridor with transit priority signal timing improvements? (This should include both cars and transit travel times)
- How long does it take to use the alternate route around a freeway incident compared to staying on the freeway?

Ideally, collection of such measures would be direct, perhaps through the use of information from FasTrak readers (if there is sufficient penetration among the vehicles in the corridor) or other individual vehicle detection. It may also be possible to obtain such measures through modeling based on information collected such as number of lanes closed and duration, dynamic traffic volumes logs, etc.

# B. Freeway Incident Characteristic Performance

Normally incident recovery gets delayed due to huge back up of traffic. Since the traffic is rerouted to well-planned alternate routes, the freeway recovery to free flow traffic is expected to happen sooner.





Freeway Incident Characteristic performance measures may seek to answer the following questions:

- How long did it take for the freeway to recover from an incident?
- How long does it take for the freeway to return to free-flow after the incident is cleared?
- What was the maximum extent and duration of the queue length on the freeway?

Similar to travel time performance measures, the collection of such freeway incident characteristic performance measures would be direct, perhaps through visual observation. It may also be possible obtain such measures through modeling based on information collected such as number of lanes closed and duration, dynamic traffic volumes logs, etc.

# C. Communications Performance

Traffic delay during freeway incidents may increase due to mis-communication between agencies and improper dissemination to the drivers. The Alternate Route system requires deploying various ITS elements for timely communication to everyone. Hence this measure would assess if proper communication has improved the efficiency in the corridor.

Communication performance measures may seek to answer the following questions:

- When did information and instructions reach the appropriate agencies? For example, time of notification of incident, time of desired actions to be taken instructed by CHP, time of instruction reaching other involved agencies (i.e. local police, local public works, etc.), time of implementation of action by other involved agencies
- Were the specified communications systems used?
- Where there any agencies those were not included in the communications that should have been?
- What was the timeliness and quality of communications to the public and the media regarding the incident and suggested alternate routes?
- Was any erroneous information sent to the media? Why was this sent and when was it corrected?

Communications performance measures could be collected by creating a timeline of various events and having a roundtable discussion with the various responding agencies and/or preparing a questionnaire to be completed by the various levels of responders (from field to dispatch) immediately following an incident. Quantitative measures could be obtained by determining the duration or time elapsed between key events. Qualitative measures would focus on the quality of communications.





# D. Agency Response Plan Performance

These measures take a larger-view perspective on the performance of the alternative routes to see if the deployment of the Agency Response Plan had beneficial results as expected during incidents

Agency Response Plan performance measures may seek to answer the following questions?

- Did all the ITS elements function along the given route?
- How long did it take for ITS elements to be activated and impact public behavior?
- Was actions or events occurred that were not anticipated?
- What about the plan could be improved?

Agency Response Plan performance measures could be collected by having a roundtable discussion with the various responding agencies and/or preparing a questionnaire to be completed by the various levels of responders (from field to dispatch). This information should be collected as soon as possible after the incident response. Such measures would be more qualitative.



# IV. ALTERNATE ROUTES

This section contains alternate routes developed for incidents within the limits of State Routes listed in Section I (Overview). The overall list of Alternate Routes is arranged as follows:

- Southbound US 101 from North to South
- Northbound US 101 from South to North
- Southbound I-280 from North to South
- Northbound I-280 from South to North
- Westbound I-380 from East to West
- Eastbound I-380 from West to East
- Westbound SR 92 from East to West
- Eastbound SR 92 from West to East

In general, the alternate routes divert traffic from the freeway at the nearest upstream exit onto a parallel arterial to travel past the incident and then reentering the original freeway. <u>In some instances, due to the severity of the incident and/or amount of queue build-up, it may be advisable to implement the alternate route further upstream and to connect several alternate routes together past the incident.</u>

Special freeway-to-freeway routes and interchange failure routes for selected movements have also been developed. The freeway-to-freeway routes may be used for severe incidents where the freeway may be entirely or substantially blocked and traffic should also be diverted to other freeways in order to avoid heavy traffic volumes on local streets. The interchange failure routes include all loop ramps, as well as other major interchange movements, and may be used when an incident on a loop ramp prevents traffic from using the interchange to travel to another freeway.

# A. Alternate Route Layout

The alternate routes were prepared using Geographical Information Systems (GIS), mapping software that creates, and manages spatial data and associated attributes. The locations of incident locations, alternate routes, and alternate route elements (both existing and future) were entered into the GIS database for this project allowing for tailor-made maps and views. This will allow future updates to the maps (e.g., as planned elements are installed) to be easily generated. Each alternate route is one page and includes the following items to help with the selection and implementation of a route(as applicable). Further details on these alternate route elements are included in Section I (Overview).

- Incident location
- Alternate route path
- Existing infrastructure along the route (traffic signals, ramp meters)
- Locations for suggested personnel deployment. (These deployments are primarily for traffic control and will be staffed depending on specific traffic flow patterns and available resources.)





- Locations of nearby Changeable Message Signs (CMS) on State Routes
- Future infrastructure, including pan-tilt-zoom (PTZ) cameras, fixed intersection cameras, and trailblazer signs. (Alternative Routes should be updated as these elements are installed.)
- Jurisdictions along the alternate route path
- Adjacent jurisdictions upstream of incident (that may be impacted by congestion)
- Link to emergency telephone numbers (for emergency tactical response). (These phone numbers will be printed on the back for hard copies.)

# B. Alternate Route Numbering Convention

Each Alternate Route is assigned a route number that summarizes the following information:

- Freeway
- Travel direction
- Exit number where the route begins
- Route number

For example, Route No. 101-S-426-1 would indicate the alternate route for US 101, in the southbound direction, starting at exit 426, using alternate route 1.

# C. Alternate Routes by Incident Location

The following tables provide a quick reference from the route type (freeway-to-freeway, interchange failure, local arterial) and location of the incident to the nearest Alternate Route number.

- Table 1: Freeway-to-freeway alternate routes
- Table 2: Interchange failure alternate routes
- Table 3: Local arterial alternate routes

Each table is grouped by originating freeway and includes the incident location, potentially impacted jurisdictions and the alternate route number. As mentioned previously, <u>in some instances</u>, <u>due to the severity of the incident and/or amount of queue build-up, it may be advisable to implement the alternate route further upstream and to connect several <u>alternate routes together past the incident</u>. The electronic version of this document includes hyperlinks to allow the document to be used electronically. These links include the following:</u>

- Linking the route number shown in the summary tables (organized by incident type and location) directly to the applicable route.
- Linking the alternate routes with a pull up of the list of emergency contacts for each jurisdiction and a list of items to consider when deploying an alternate route.





TABLE 1: FREEWAY-TO-FREEWAY ALTERNATE ROUTES  * Adjacent jurisdiction potentially impacted by congestion		
Incident Location	Jurisdiction	Route
US 101 ALTERNATE ROUTES		
SB 101 between I-380 and SR 92	San Mateo Foster City Burlingame Millbrae, San Bruno	101-S-423B-3
NB 101 between I-380 and SR 92	San Mateo Foster City Burlingame Millbrae San Bruno	101-N-414B-3
I-280 ALTERNATE ROUTES		
I-280 between I-380 and SR 92	San Mateo Foster City Burlingame Millbrae San Bruno	280-S-43A-1
I-280 between I-380 and SR 92	San Mateo Foster City Burlingame Millbrae San Bruno	280-N-33-2
SR-92 ALTERNATE ROUTES		
SR 92 between I-280 and US 101	San Mateo Foster City Burlingame Millbrae San Bruno	280-N-43B-1
SR 92 between I-280 and US 101	San Mateo Foster City Burlingame Millbrae San Bruno	92-W-13B-1



TABLE 2: INTERCHANGE FAILURE ALTERNATE ROUTES			
* Adjacent jurisdiction potentially impacted by Incident Location		Doute	
US 101 ALTERNATE ROUTES	Jurisdiction	Route	
US 101 SB to I-380 EB loop ramp	South San Francisco	101-S-423A-1	
US 101 SB to I-380 WB ramp thru I-380 W at El Camino Real	South San Francisco, San Bruno	101-S-423B-1	
US 101 NB to I-380 WB ramp thru I-380 W at El Camino Real	South San Francisco, San Bruno	101-N-423A-2	
I-280 ALTERNATE ROUTES			
I-280 SB to I-380 EB ramp thru I-380 E at El Camino Real.	South San Francisco, San Bruno	280-S-43B-2	
I-280 NB to I-380 EB ramp thru I-380 E at El Camino Real.	South San Francisco, San Bruno	280-N-43A-2	
SR 92 ALTERNATE ROUTES			
SR 92 WB to 101 SB loop ramp	San Mateo Foster City	92-W-12A-2	
SR 92 WB to I-280 SB ramp thru SR 92 WB at Polhemus Rd	San Mateo	92-W-9A-1	
SR 92 WB to I-280 NB ramp thru SR 92 WB at Polhemus Rd	San Mateo	92-W-9A-2	
SR 92 EB to US 101 NB ramp thru SR 92 EB at El Camino Real	Foster City	92-E-12C-2	
SR 92 EB to I-280 NB loop ramp	San Mateo	92-E-SR 35-1	



TABLE 3: LOCAL ARTERIAL ALTERNATE ROUTES  *Adjacent jurisdiction potentially impacted by congestion			
Incident Location	Jurisdiction	Route	
US 101 (SOUTHBOUND) ALTERNATE ROUT		110000	
SB 101 between Beatty Rd and Lagoon Wy	Brisbane, South San	101-S-429A-1	
	Francisco*, Daly City*	101-S-429A-2	
SB 101 between Lagoon Wy and Oyster Point Blvd	Brisbane, South San Francisco	101-S-426-1	
SB 101 between Oyster Point Blvd and	South San Francisco	101-S-425A-1	
Produce Ave		101-S-425B-2	
SB 101 between Grand Ave/Miller Ave and Produce Ave	South San Francisco	101-S-425B-1	
SB 101 between Produce Ave and I-380	South San Francisco, San Bruno*	101-S-425A-2	
SB 101 between WB Interstate 380 and Millbrae Ave	San Bruno, South San Francisco, Millbrae	101-S-423B-2	
SB 101 between Millbrae Ave and Broadway	Millbrae, Burlingame, San Mateo*	101-S-421-1 101-S-421-2 101-S-421-3	
SB 101 between Broadway and Popular Ave	Burlingame, San Mateo, Belmont*, Redwood City*	101-S-419B-1 101-S-419B-2	
SB 101 between Poplar Ave and E. 4th Ave	San Mateo, Belmont*, Redwood City*	101-S-417-1	
SB 101 between 3rd Ave and SB 101/ EB 92	San Mateo, Belmont*, Redwood City*	101-S-416-1	
SB 101 between WB State Route 92 and Hillsdale Blvd.	San Mateo, Belmont*, Redwood City*	101-S-414B-1	
SB 101 between Hillsdale Blvd and Ralston Ave	San Mateo, Belmont, Redwood City*, San Carlos*	101-S-414A-1	
SB 101 between Ralston Ave and Harbor Blvd.	Belmont, San Carlos*	101-S-412-1 101-S-412-2 101-S-412-3	
SB 101 between Harbor Blvd and Holly St.	Belmont, San Carlos, Redwood City*	101-S-412B-1	
SB 101 between Holly St and Whipple Ave	San Carlos, Redwood City, Atherton*	101-S-411-1	
SB 101 between Whipple Ave and Veterans Blvd.	Redwood City, Atherton*	101-S-409-1	
SB 101 between Woodside Rd and Marsh Rd.	Redwood City, Menlo Park, North Fair Oaks*, Atherton*, East Palo Alto*	101-S-408-1 101-S-408-2	
SB 101 between Marsh Rd. and Willow Rd	Menlo Park, Atherton*, East Palo Alto*, Santa Clara County*, Redwood City*, North Fair Oaks*	101-S-406-1 101-S-406-2	
SB 101 between Marsh Rd. and University Ave	Menlo Park, Atherton, East Palo Alto*, Santa Clara County*	101-S-406-3	





TABLE 3: LOCAL ARTERIAL ALTERNATE ROUTES			
*Adjacent jurisdiction potentially impacted by co		Doute	
Incident Location	Jurisdiction	<b>Route</b> 101-S-403-1	
SB 101 between University Ave and Embarcadero Rd	East Palo Alto, Santa Clara County	101-5-403-1	
US 101 (NORTHBOUND) ALTERNATE ROUT			
NB 101 between Embarcadero Rd and		101 N 402 1	
University Ave	East Palo Alto, Santa Clara County	101-N-402-1	
NB 101 between University Ave and Willow Rd	Menlo Park, East Palo Alto, Santa Clara County*, Redwood City*	101-N-403-1	
NB 101 between Willow Rd and Marsh Rd	Menlo Park, East Palo Alto, Atherton*, Redwood City*, Santa Clara County*	101-N-404B-1 101-N-404B-2	
NB 101 between Marsh Rd and Woodside Rd	Menlo Park, Atherton, North Fair Oaks, Redwood City, East Palo Alto*	101-N-406-1 101-N-406-2	
NB 101 between Woodside Rd and Whipple Ave	San Carlos, Redwood City, Menlo Park*	101-N-408-1	
NB 101 between Whipple Ave and Holly St	San Carlos, Redwood City, Menlo Park*	101-N-409-1	
NB 101 between Holly St and Ralston Ave	San Carlos, Belmont, Redwood City, San Mateo*	101-N-411-1 101-N-411-2	
NB 101 between Ralston Ave and Hillsdale Blvd	Belmont, San Mateo, San Carlos*	101-N-412-1	
NB 101 between Hillsdale Blvd and Fashion Island Blvd	San Mateo, Foster City	101-N-414A-1 101-N-414A-2	
NB 101 between WB State Route 92 and E. 3rd Ave	San Mateo, Foster City*	101-N-414B-1 101-N-414B-2	
NB 101 between Kehoe Ave and 3rd Ave	San Mateo	101-N-415-1	
NB 101 between 3rd Ave and Coyote Point Dr.	San Mateo, Burlingame*	101-N-416-1	
NB 101 between Dore Ave and Bayshore Blvd	San Mateo	101-N-417A-1	
NB 101 between Coyote Point Dr/ Peninsula Ave and Anza Blvd	San Mateo, Burlingame, Millbrae*	101-N-417B-1	
NB 101 between Anza Blvd and Bayshore Hwy	Burlingame	101-N-419A-1	
NB 101 between Broadway and Millbrae Ave	Burlingame, Millbrae	101-N-419B-1 101-N-419B-2	
NB 101 between Millbrae Ave and EB Interstate 380	Millbrae, San Bruno, South San Francisco	101-N-421-1	
NB 101 between San Bruno Ave and Airport Blvd	San Bruno, South San Francisco	101-N-423A-1	
NB 101 between EB Interstate 380 and Airport Blvd	South San Francisco, San Bruno, Brisbane*	101-N-423C-1	
NB 101 between Wondercolor Ln and Interstate 380	South San Francisco	101-N-423C-2	
NB 101 between Wondercolor Ln and Grand Avenue	South San Francisco, Brisbane*	101-N-424-1 101-N-424-2	





TABLE 3: LOCAL ARTERIAL ALTERNATE ROUTES			
*Adjacent jurisdiction potentially impacted by congestion			
Incident Location	Jurisdiction	Route	
NB 101 between Grand Ave and Oyster Point	South San Francisco,	101-N-425A-1	
Blvd	Brisbane*	101-N-425A-2	
NB 101 between Brisbane/Cow Palace and	South San Francisco,	101-N-426A-1	
3rd St	Brisbane		
I-280 (SOUTHBOUND) ALTERNATE ROUTES			
SB 280 between John Daly Blvd and Hickey	Daly City, South San	280-S-49-1	
Blvd	Francisco, Colma		
SB 280 between Highway 1 and Hickey Blvd	Daly City, Colma, South	280-S-47B-1	
	San Francisco*		
SB 280 between Hickey Blvd and	Daly City, South San	280-S-46-1	
Westborough Blvd	Francisco		
SB 280 between Westborough Blvd and	South San Francisco,	280-S-45-1	
Sneath Ln	San Bruno, Millbrae*		
SB 280 between Sneath Lane and Skyline	San Bruno, Millbrae*	280-S-43B-1	
Blvd	·		
SB 280 between Skyline Blvd and Larkspur		No viable alt.	
Dr		route	
SB 280 between Larkspur Dr and Hillcrest	Millbrae, Burlingame*	280-S-41-1	
Blvd			
SB 280 between Hillcrest Blvd and Trousdale		No viable alt.	
Dr		route	
SB 280 between Trousdale Dr and Hayne Dr	Hillsborough	280-S-39-1	
SB 280 between Hayne Dr and Bunker Hill	Hillsborough, San	280-S-36-1	
Rd	Mateo*		
SB 280 between Bunker Hill Rd and SR 92	San Mateo, Belmont*	280-S-34-1	
I-280 (NORTHBOUND) ALTERNATE ROUTES			
NB 280 between SR 92 and Bunker Hill Rd	San Mateo, Belmont*	280-N-33-1	
NB 280 between Bunker Hill Rd and Hayne	Hillsborough, San Mateo	280-N-34-1	
Dr			
NB 280 between Hayne Dr and Trousdale Dr	Millbrae, Burlingame,	280-N-36-1	
	Hillsborough, San		
	Mateo, Belmont*		
NB 280 between Trousdale Dr and Hillcrest		No viable alt.	
Blvd		route	
NB 280 between Hillcrest Blvd and Larkspur	Millbrae, San Bruno*	280-N-40-1	
Dr			
NB 280 between Larkspur Dr and Skyline		No viable alt.	
Blvd		route	
NB 280 between Skyline Blvd / Crystal	Millbrae, San Bruno,	280-N-41-1	
Springs Rd and Sneath Ln	South San Francisco*		
NB 280 between San Bruno Ave and	South San Francisco,	280-N-43A-1	
Westborough Blvd	San Bruno, Daly City*		
NB 280 between Westborough Blvd and	South San Francisco,	280-N-44-1	
Serramonte Blvd	San Bruno, Daly City		
NB 280 between Hickey Blvd and Junipero	Daly City, South San	280-N-46-1	
Serra Blvd	Francisco, Colma		
NB 280 between Junipero Serra Blvd and	Daly City, South San	280-N-47-1	
John Daly Blvd	Francisco, Colma		
I-380 (WESTBOUND) ALTERNATE ROUTES			
WB 380 between US 101/ San Bruno Ave	South San Francisco,	101-N-423A-2	
and El Camino Real	San Bruno, Millbrae*	101-S-423B-1	



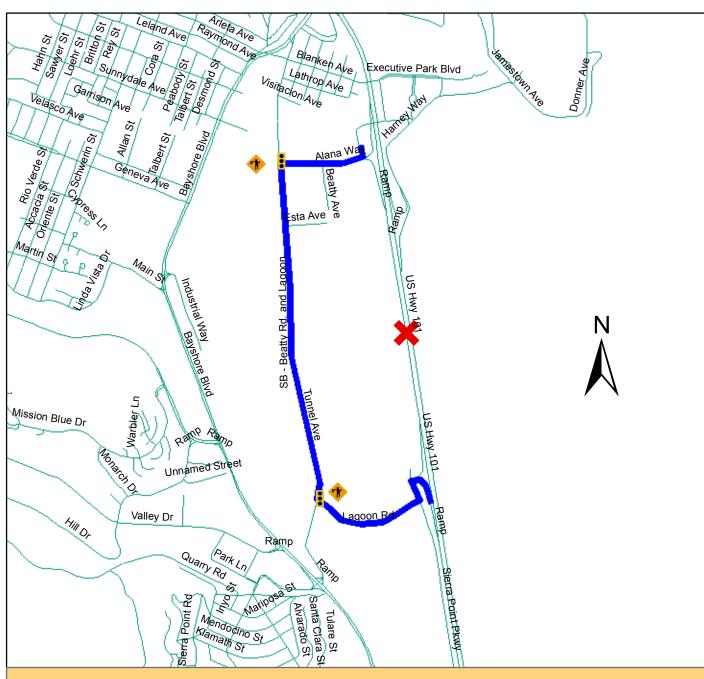


TABLE 3: LOCAL ARTERIAL ALTE	RNATE ROUTES		
*Adjacent jurisdiction potentially impacted by congestion			
Incident Location	Jurisdiction	Route	
WB 380 between El Camino Real and San	South San Francisco*,	380-W-5C-1	
Bruno Ave	San Bruno		
I-380 (EASTBOUND) ALTERNATE ROUTES			
EB 380 between I-280/ San Bruno Ave and El	South San Francisco*,	280-N-43A-2	
Camino Real	San Bruno	280-S-43B-2	
EB 380 between El Camino Real and San	South San Francisco,	380-E-5-1	
Bruno Ave	San Bruno		
SR 92 (WESTBOUND) ALTERNATE ROUTES			
WB 92 between Foster City Blvd and Baker	Foster City, San Mateo	92-W-14B-1	
Wy			
WB 92 between Baker Wy and US 101	San Mateo, Foster City*	92-W-14A-1	
WB 92 between SB US 101 and Delaware St	San Mateo	92-W-13A-1	
WB 92 between Delaware St and El Camino	San Mateo	92-W-12C-1	
Real			
WB 92 between El Camino Real and	San Mateo	92-W-12A-1	
Alameda de Las Pulgas			
WB 92 between Alameda de Las Pulgas and	San Mateo, Belmont,	92-W-11-1	
Ralston Ave	Hillsborough*		
WB 92 between De Anza Blvd and Polhemus	San Mateo, Belmont*	92-W-9B-1	
Rd/ Ralston Av			
WB 92 between Polhemus Rd/ Ralston Av	San Mateo,	92-W-9A-1	
and SB I-280	Hillsborough*	92-W-9A-2	
SR 92 (EASTBOUND) ALTERNATE ROUTES		T	
EB 92 between SB I-280/ Hayne Dr and	San Mateo,	280-S-36-2	
Polhemus Rd/ Ralston Av	Hillsborough, Belmont*		
EB 92 between Ralston Av and Alameda de	San Mateo, Belmont	92-E-9A-1	
Las Pulgas			
EB 92 between Hillsdale Blvd and Alameda	San Mateo,	92-E-10-1	
de Las Pulgas	Hillsborough*	00 = 11 1	
EB 92 between Alameda de Las Pulgas and	San Mateo	92-E-11-1	
El Camino Real	O are Made	00 5 404 4	
EB 92 between El Camino Real and	San Mateo	92-E-12A-1	
Delaware St	Oran Matara E. (1. O); †	00 5 400 4	
EB 92 between Delaware St and US 101/	San Mateo, Foster City*	92-E-12C-1	
Hillsdale Blvd	Can Matas Fastan Office	00 5 404 4	
EB 92 between SB US 101 and Edgewater	San Mateo, Foster City	92-E-13A-1	
Blvd/ Mariners Island Blvd	Con Motos Faster City	00 5 444 4	
EB 92 between Edgewater Blvd/ Mariners	San Mateo, Foster City	92-E-14A-1	
Island Blvd and Foster City Blvd			



# **Appendix A: Programmed ITS Projects along Corridor**

Jurisdiction	Project Type	Location
Atherton	Signal Controller	Middlefield / Marsh Rd
Atherton	Video Detection	Middlefield / Marsh Rd
Burlingame	Signal Controller	Broadway / California Dr
Burlingame	Signal Controller	California Dr / Bayswater Ave
Burlingame	Signal Controller	California Dr / Howard Ave
Burlingame	Signal Controller	California Dr / Oak Grove Ave
Burlingame	Signal Controller	California Dr / Burlingame Ave
Burlingame	Video Detection	California Dr / Bayswater Ave
Burlingame	Video Detection	California Dr / Howard Ave
Daly City	Signal Controller	Junipero Serra Blvd / Washington St
Daly City	Signal Controller	Junipero Serra Blvd / San Pedro Rd
Daly City	Signal Controller	Hickey Blvd / Callan Blvd
Daly City	Signal Controller	Hickey Blvd / Campus Dr
Foster City	Video Detection	E. Hillsdale Blvd / Edgewater Blvd
Foster City	Video Detection	Metro Center Blvd / SR 92 Off Ramp
San Carlos	Signal Controller	Brittan Ave / Industrial Rd
San Mateo	Signal Controller	Fashion Island Blvd / Mariners Island Blvd
San Mateo	Signal Controller	S Norfolk Str / E 3rd Ave
San Mateo	Signal Controller	N Humboldt St / E 3rd Ave
San Mateo	Signal Controller	N Delaware St / Peninsula Ave
San Mateo	Signal Controller	E Poplar Ave / San Mateo Dr
San Mateo	Signal Controller	S Humboldt St / E 4th Ave
San Mateo	Signal Controller	Bermuda Dr / S Delaware St
San Mateo	Signal Controller	Alameda de Las Pulgas / W 20th Ave
San Mateo	Signal Controller	N Humboldt St / E Poplar Ave



FREEWAY: 101 SOUTHBOUND INCIDENT LOCATION: Beaty Rd. and Lagoon Way

# **ALTERNATIVE ROUTE:**

Exit Beatty Rd.; LT on Tunnel Ave.; LT on Lagoon Rd. to SB on-ramp

# Incident Incident Alternate Route Ramp Meter Signal Possible Personel Deployment Fixed Camera PTZ Camera Trailblazer

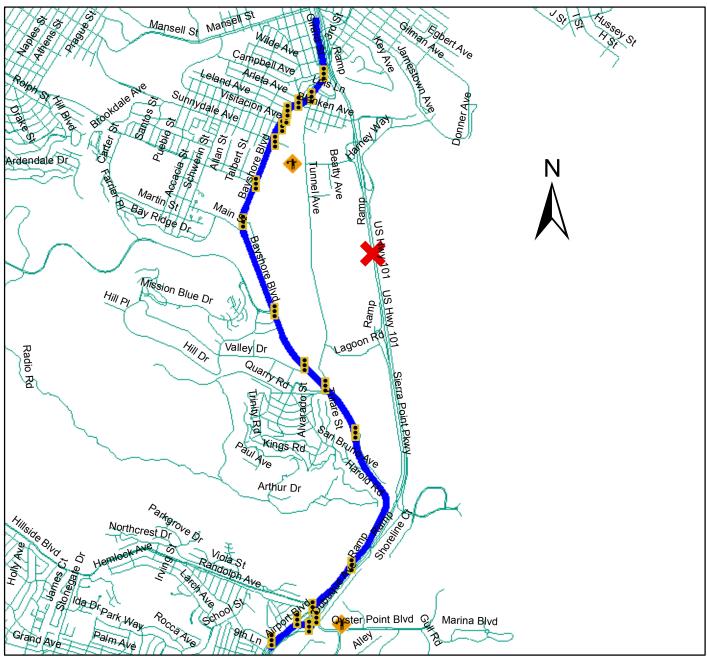
ALTERNATIVE ROUTE JURISDICTIONS:
BRISBANE SOUTH SAN FRANCISCO\*
DALY CITY\*

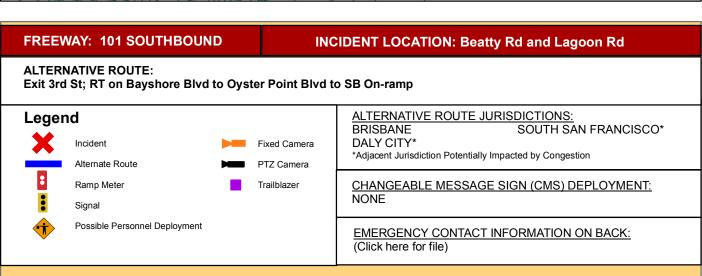
\*Adjacent Jurisdiction Potentially Impacted by Congestion

CHANGEABLE MESSAGE SIGN (CMS) DEPLOYMENT: CM005-SF280 S/B N/OF 101 SEPARATION CM046-SF280 S/B BRANNAN ST E/B ONR CM048-SF280 S/B AT 6TH ST ONR CM049-SF280 S/B AT KING ST ON RAMP

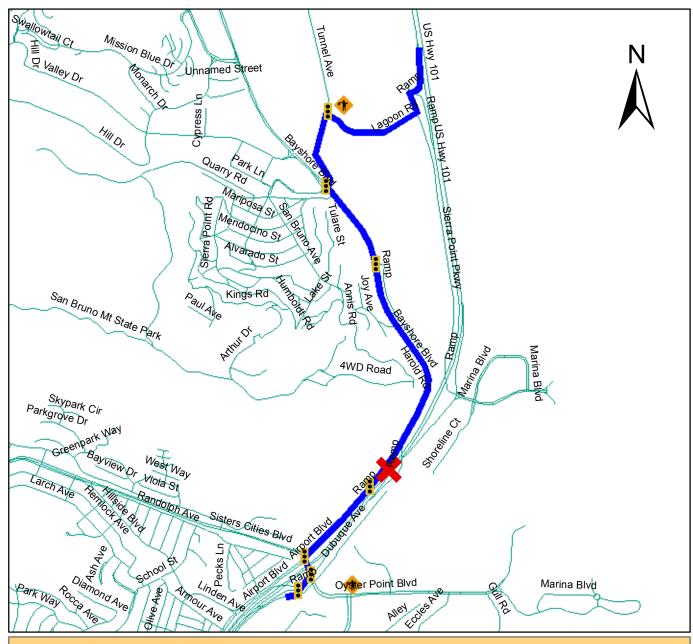
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PLAN 101-S-429A-1





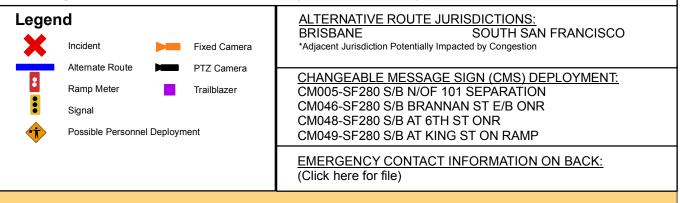
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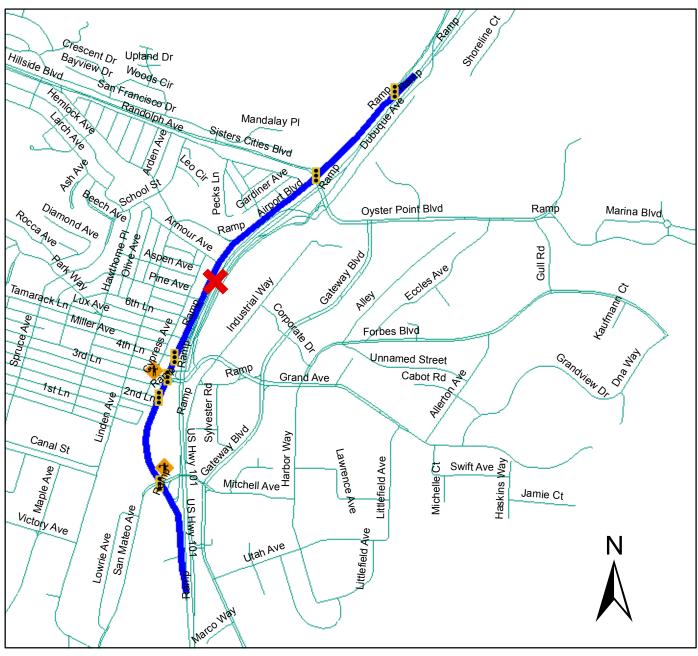


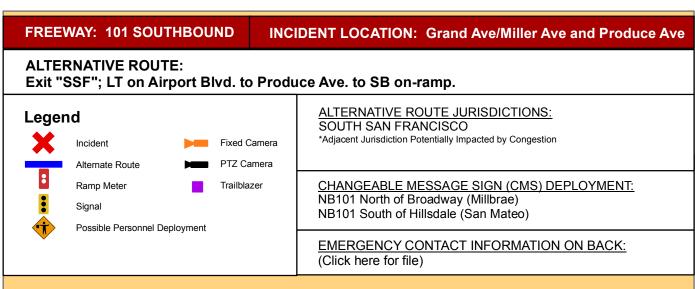
# FREEWAY: 101 SOUTHBOUND INCIDENT LOCATION: Lagoon Wy and Oyster Point Blvd

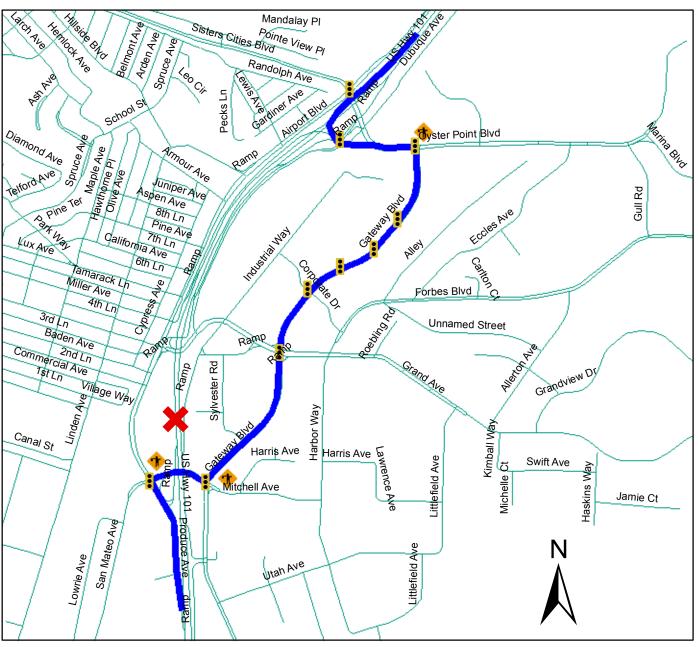
# **ALTERNATIVE ROUTE:**

Exit Lagoon Rd.; LT on Tunnel Ave; LT Bayshore Blvd. to Oyster Pt Blvd to SB On-ramp





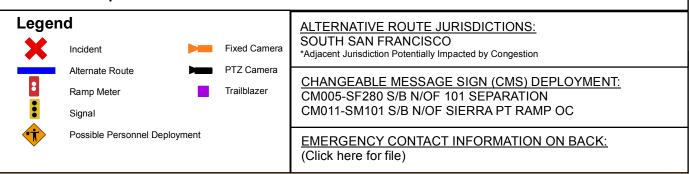




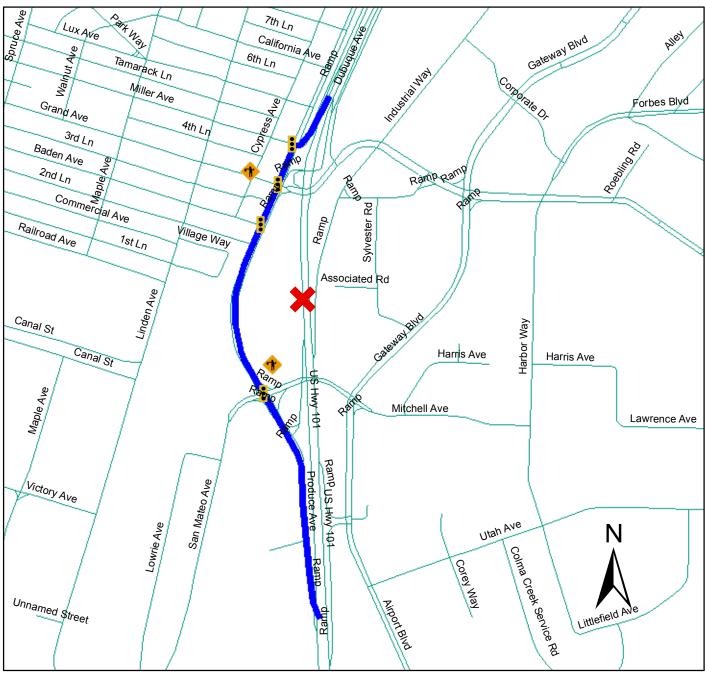
FREEWAY: 101 SOUTHBOUND INCIDENT LOCATION: Oyster Point Blvd and Produce Ave

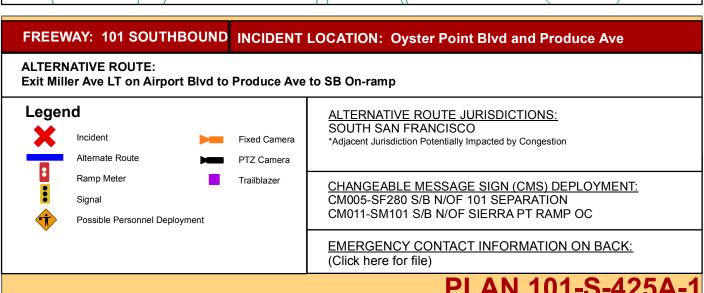
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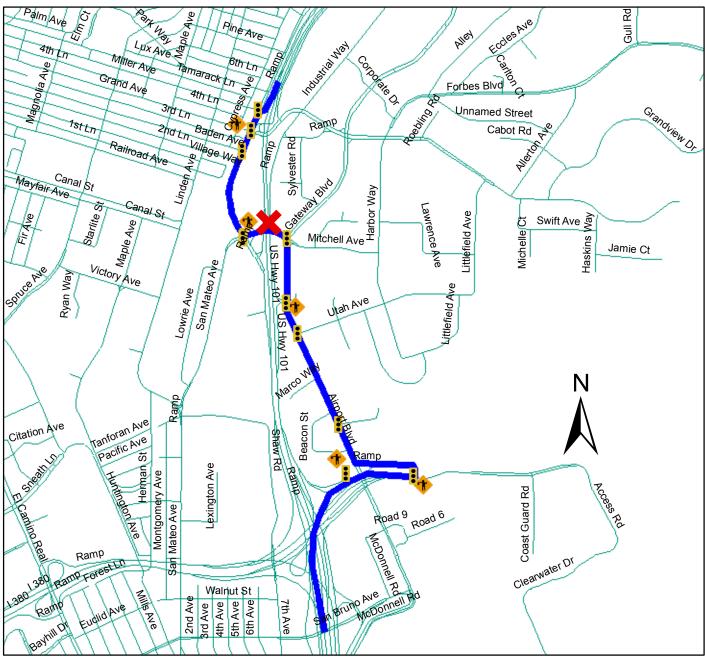
Exit Oyster Point Blvd; LT on Oyster Point Blvd; RT on Gateway Blvd; LT on Produce Ave to SB On-ramp



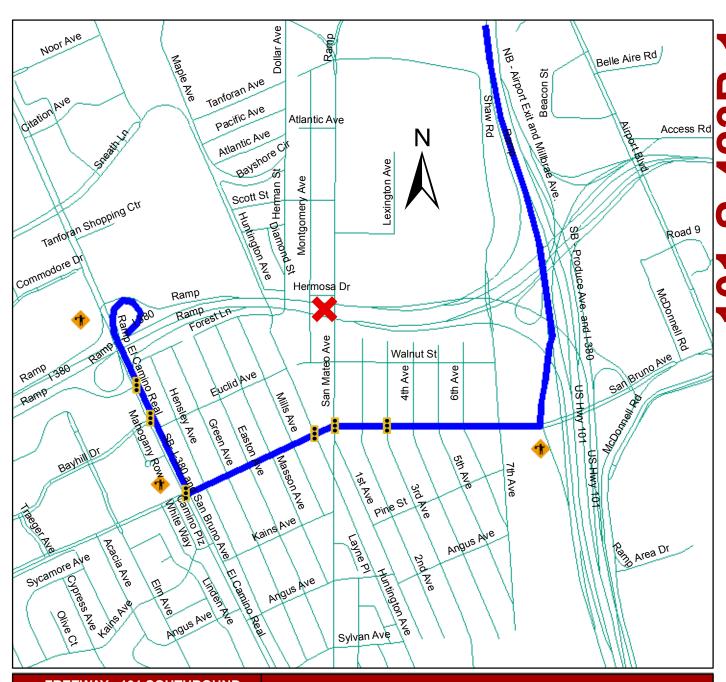
PLAN 101-S-425B-2











FREEWAY: 101 SOUTHBOUND TO 380 WESTBOUND INCIDENT LOCATION: US 101 SB to I-380W ramp through I-380 WB at El Camino Real

ALTERNATIVE ROUTE:
Exit SB US 101 at San Bruno Ave; RT on San Bruno Ave; RT on El Camino Real; RT onto WB I-380

Incident
Alternate Route
Ramp Meter
Signal
Possible Personnel Deployment
Fixed Camera
PTZ Camera
Trailblazer

on-ramp.

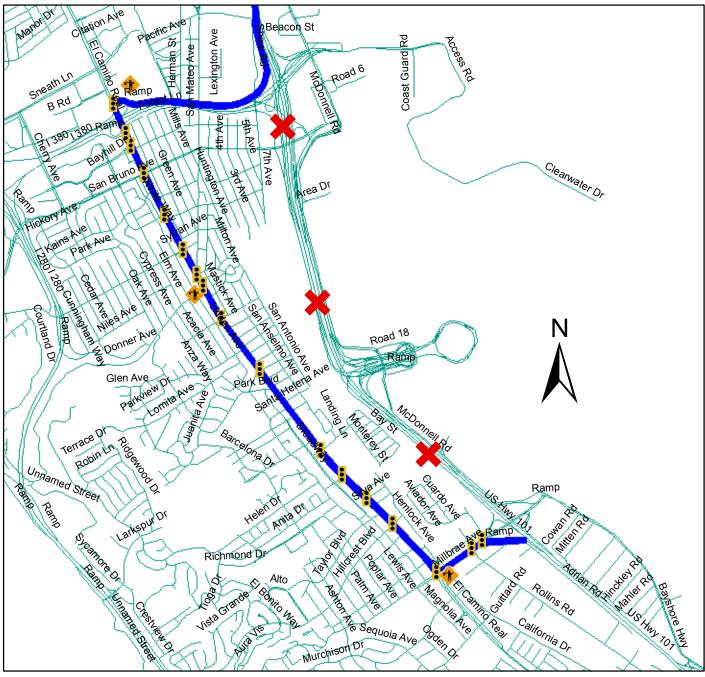
ALTERNATIVE ROUTE JURISDICTIONS:
SOUTH SAN FRANCISCO MILLBRAE\*
SAN BRUNO\*

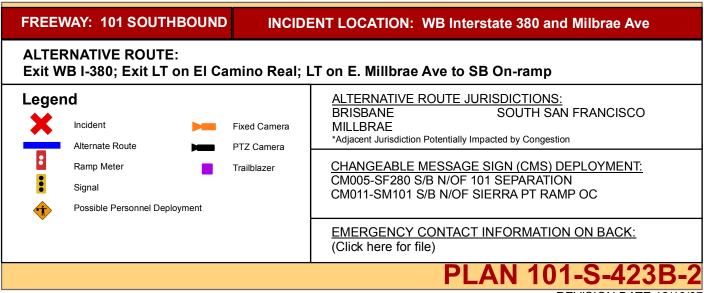
\*Adjacent Jurisdiction Potentially Impacted by Congestion

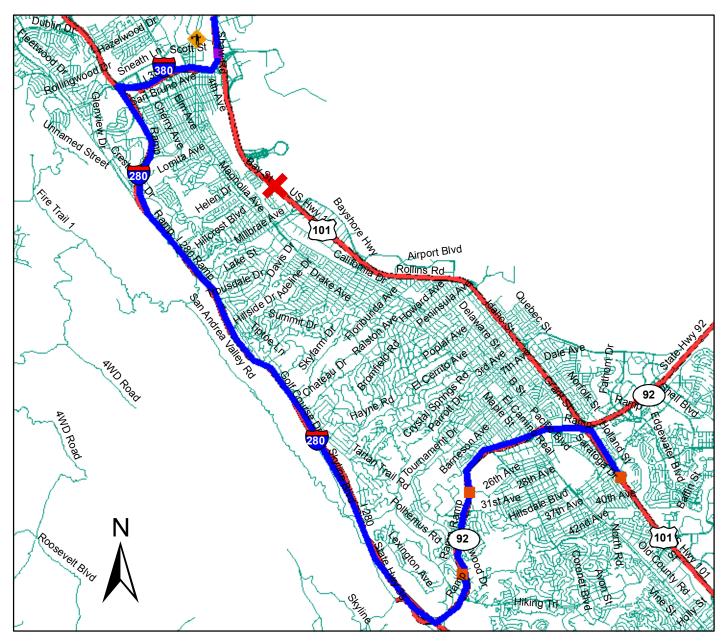
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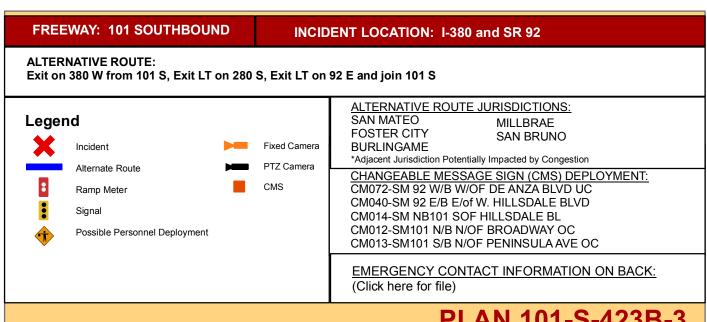
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PLAN 101-S-423B-1

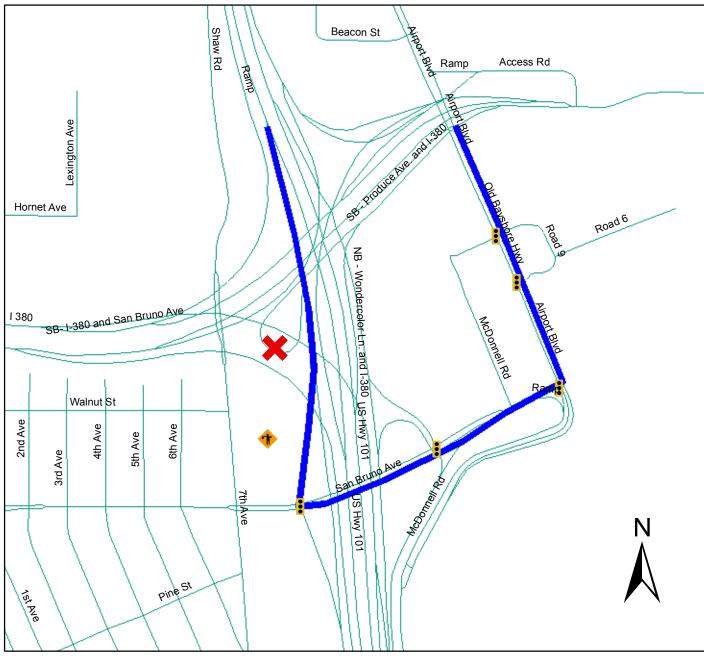


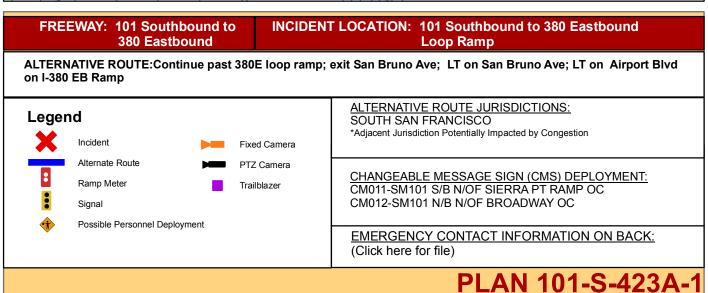


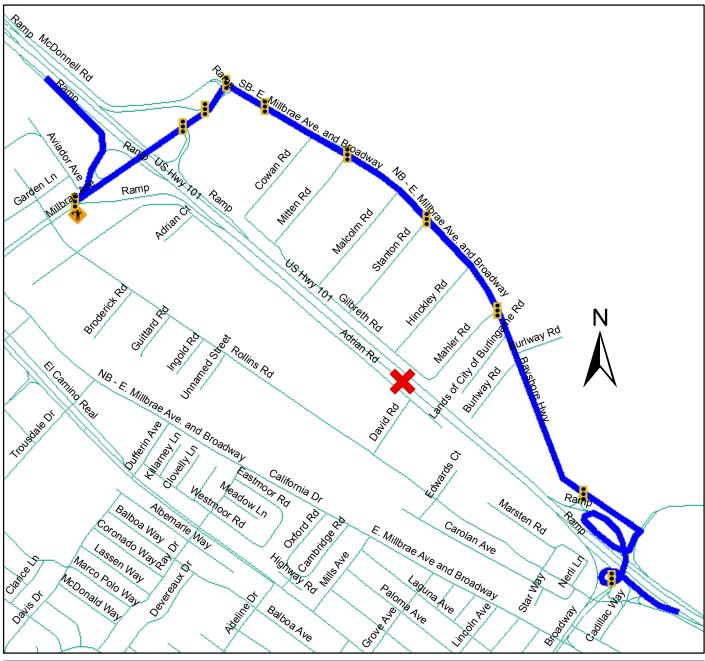


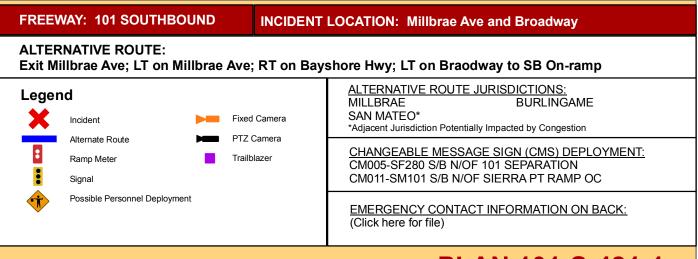


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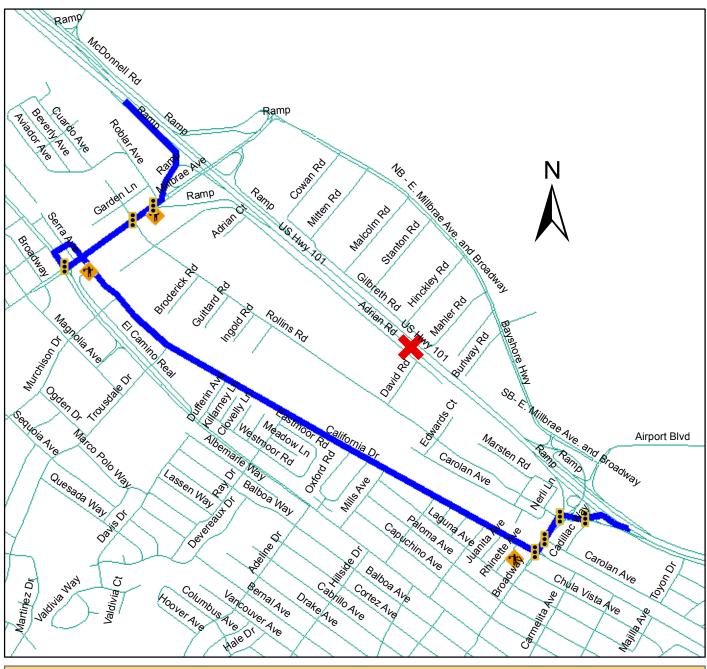


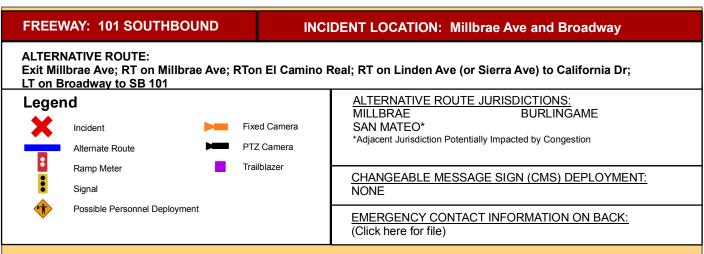




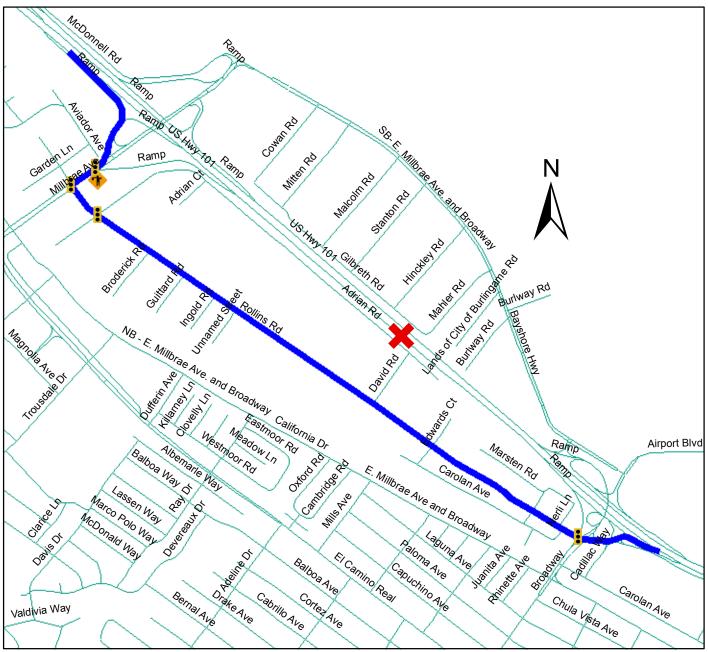


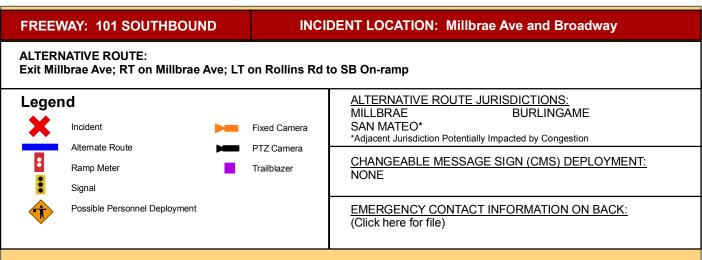
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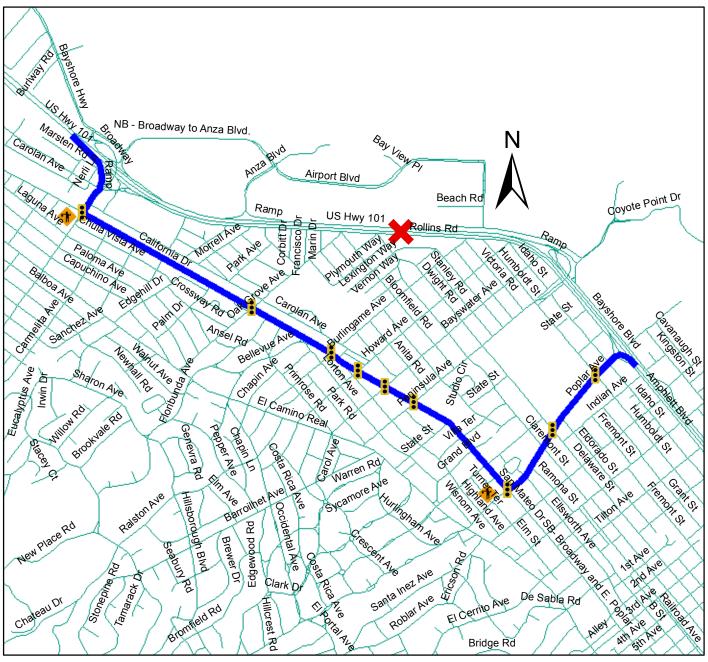


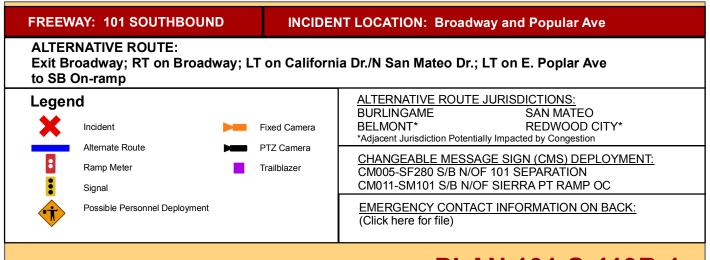
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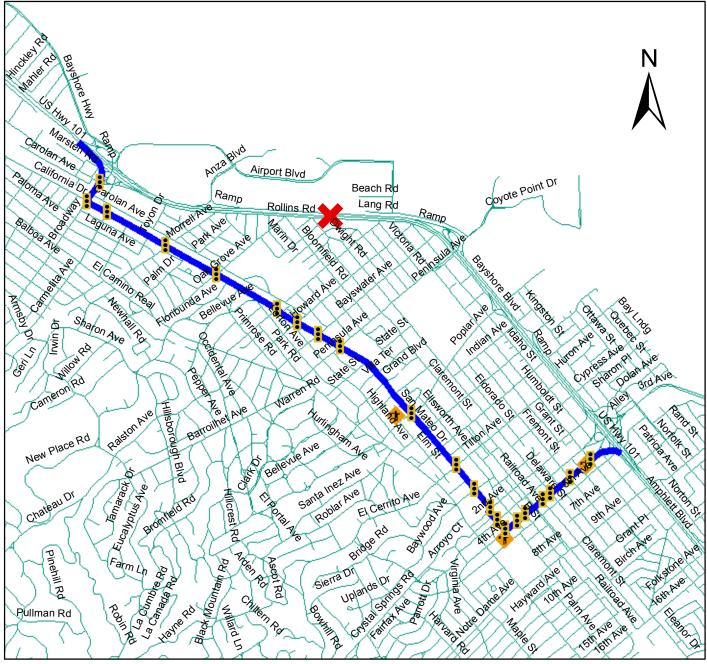


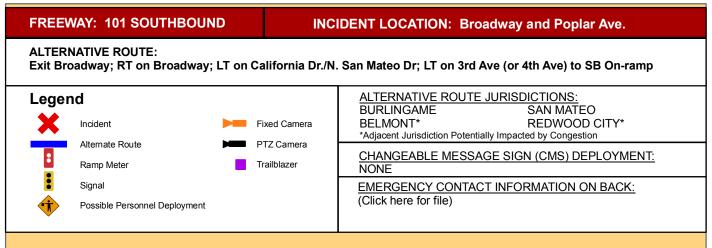


PLAN 101-S-421-3

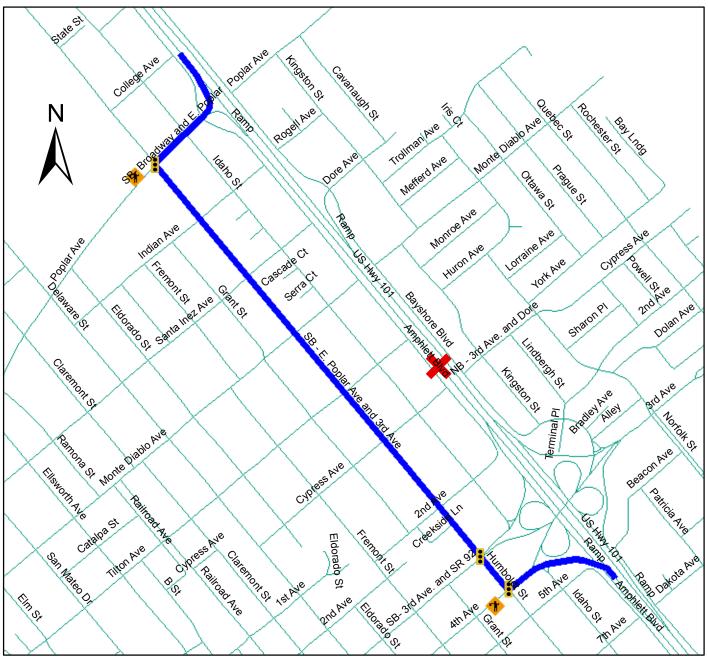


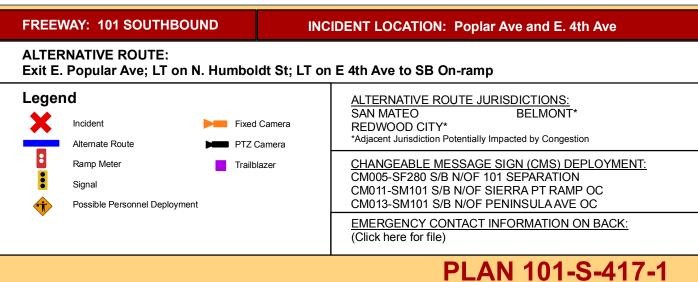


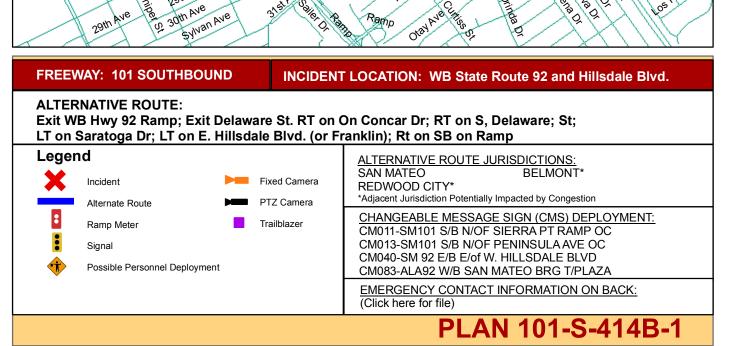




PLAN 101-S-419B-2







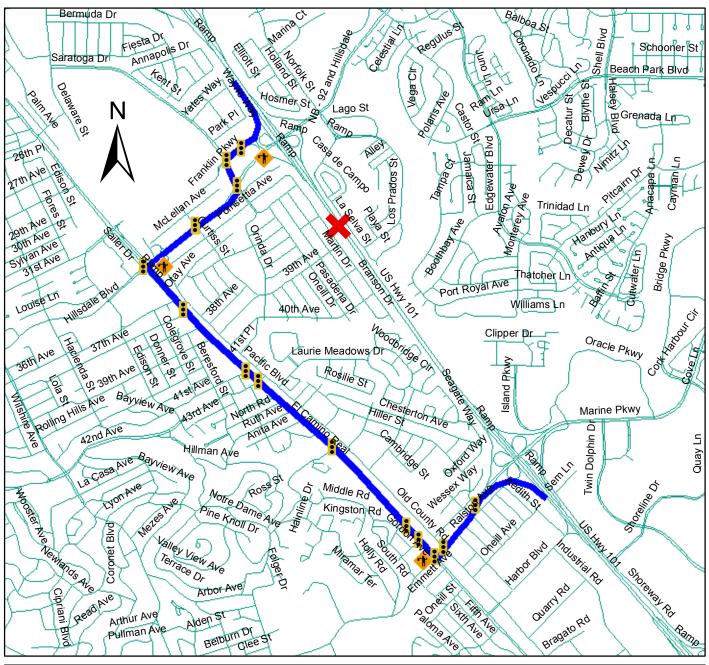
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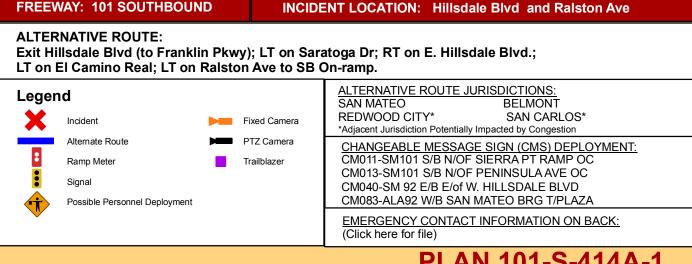
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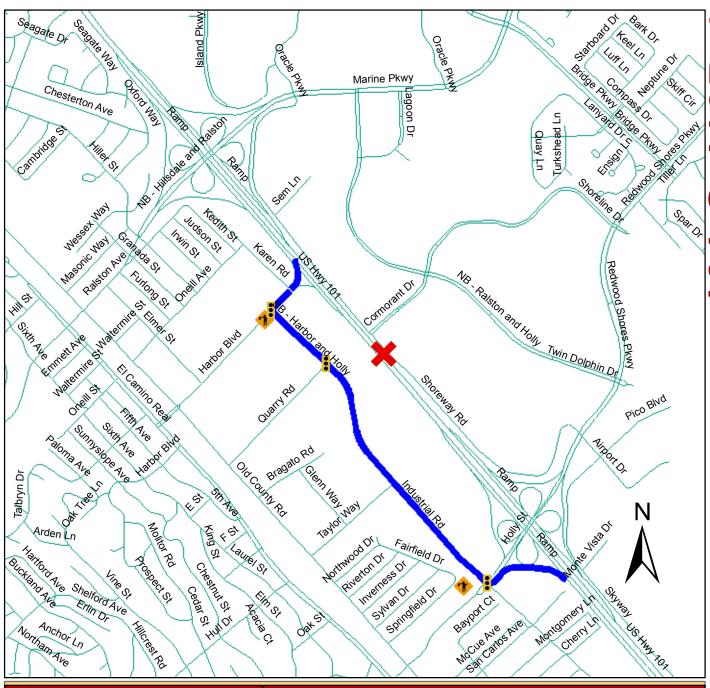
29th Ave

of 30th Ave

29th A







FREEWAY: 101 SOUTHBOUND INCIDENT LOCATION: Harbor Blvd and Holly St.

ALTERNATIVE ROUTE: Exit Harbor Blvd.; LT on industrial Rd; LT on Holly St to SB On-ramp

## Legend Incident Alternate Route Ramp Meter Signal Fixed Camera PTZ Camera Trailblazer

Possible Personnel Deployment

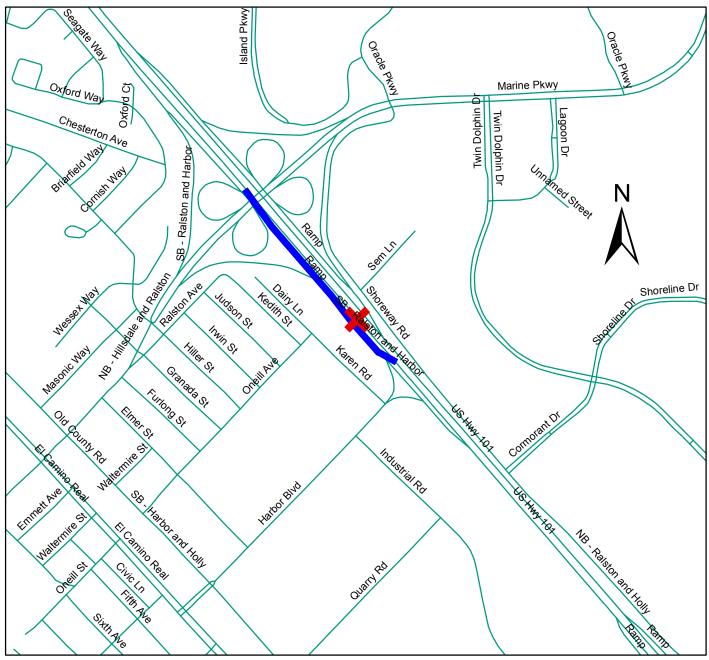
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REDWOOD CITY\*

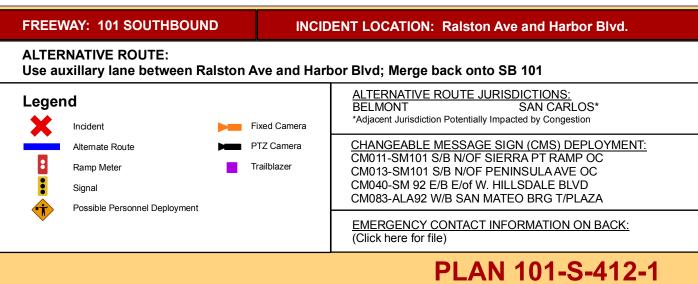
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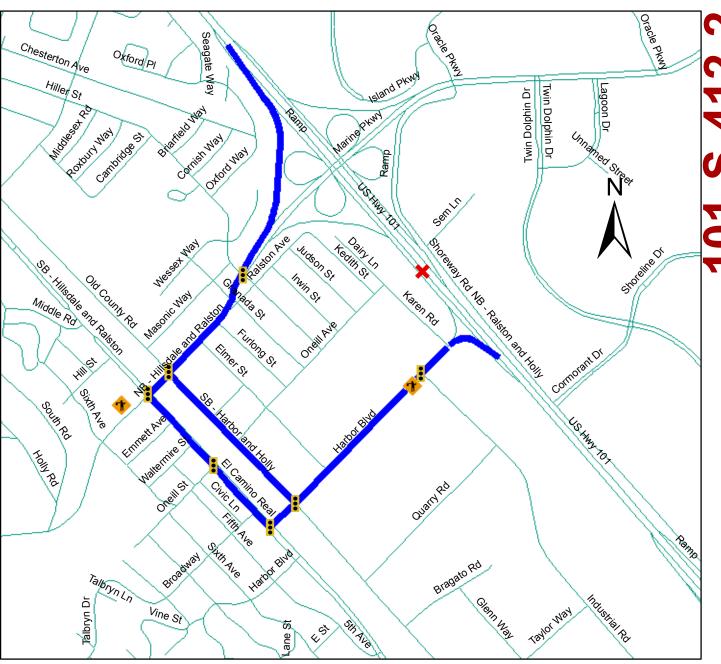
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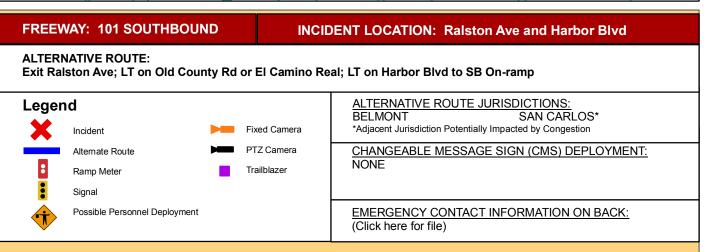
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PLAN 101-S-412B-1

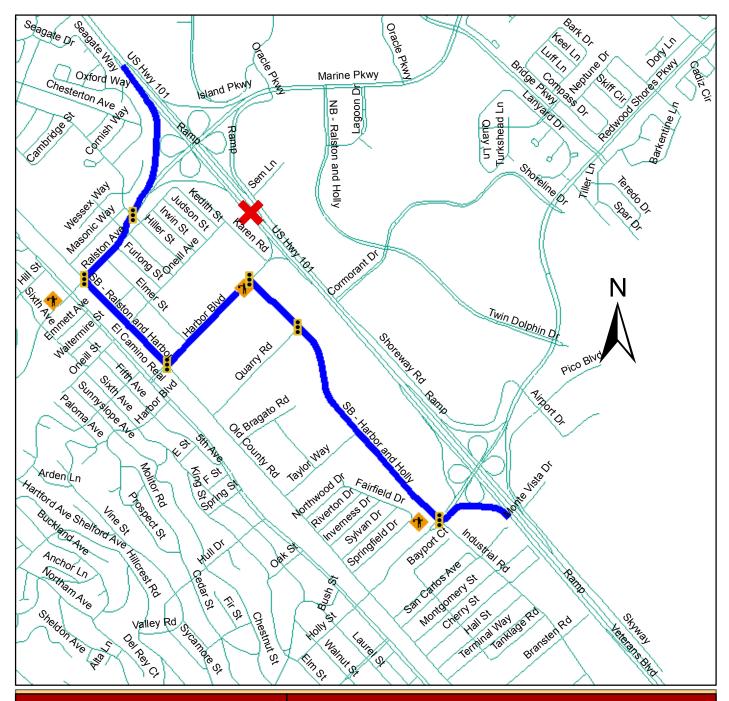


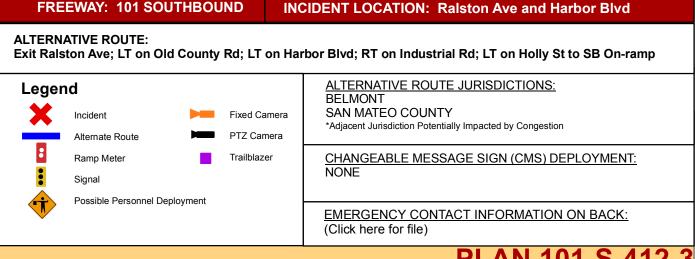


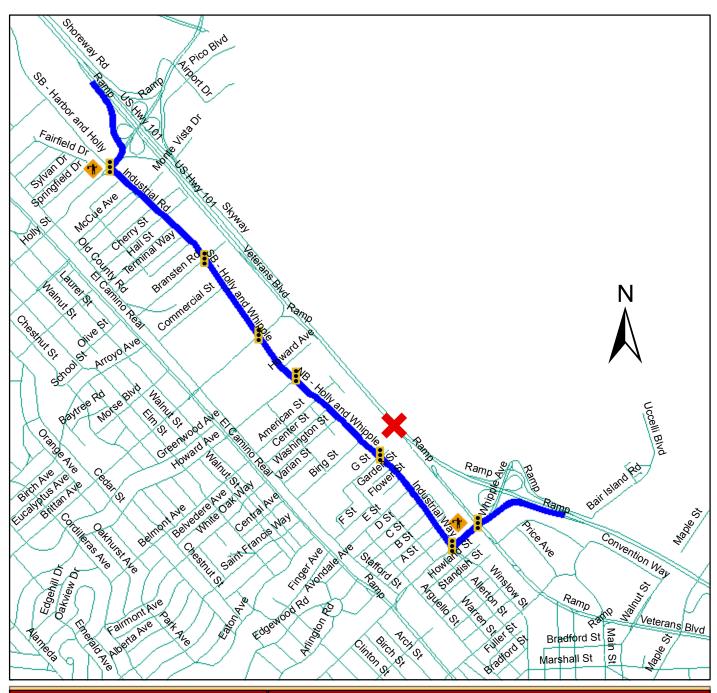


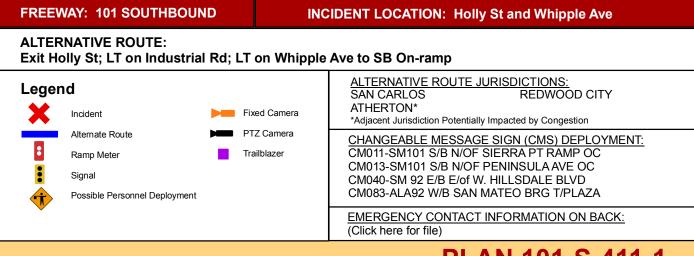


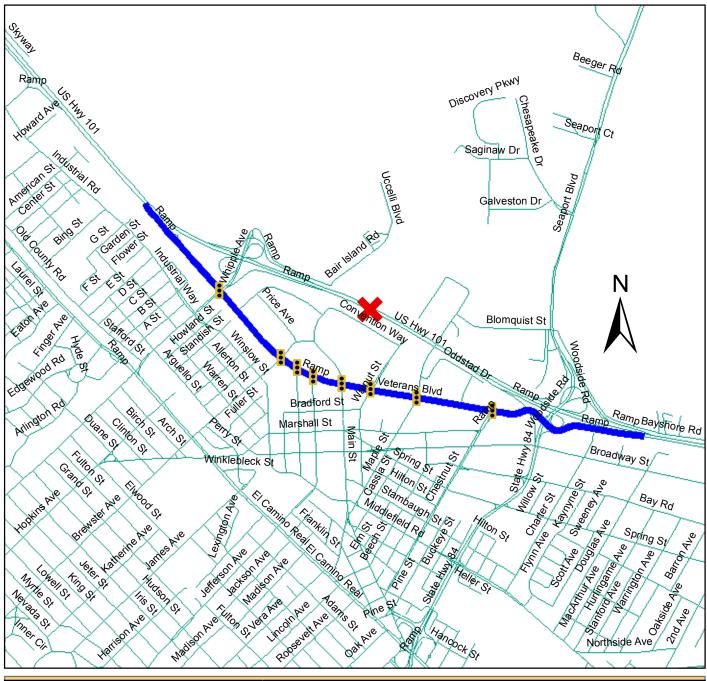
PLAN 101-S-412-2

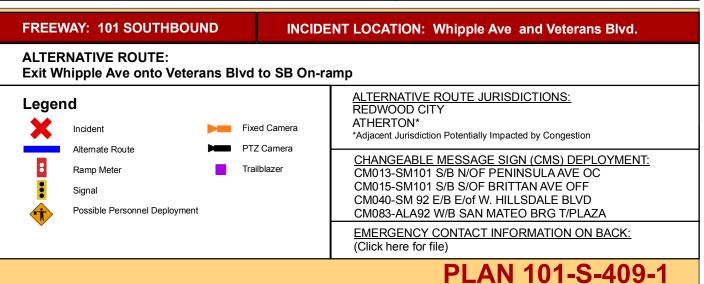


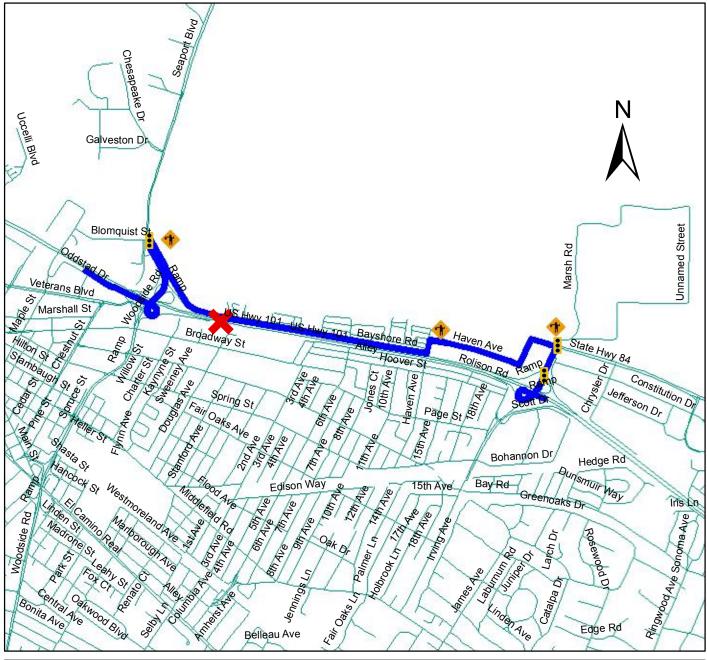


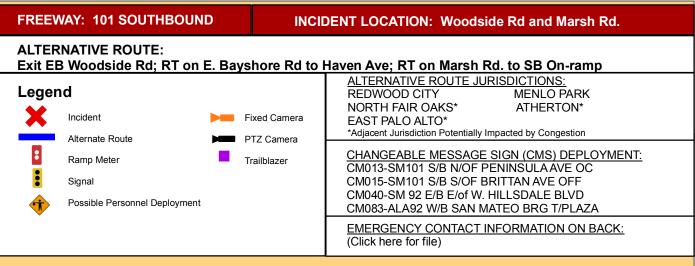




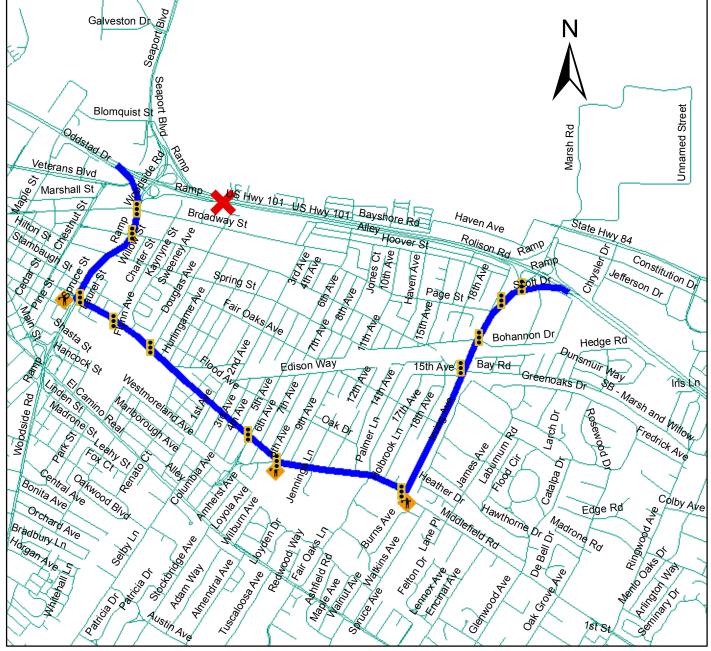


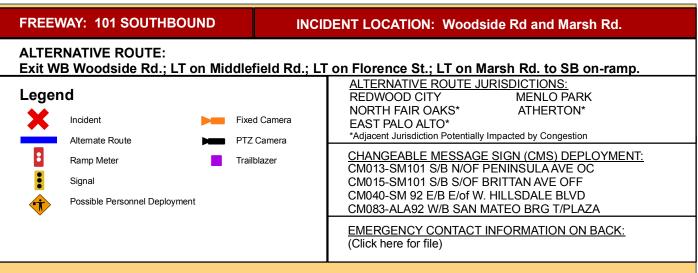


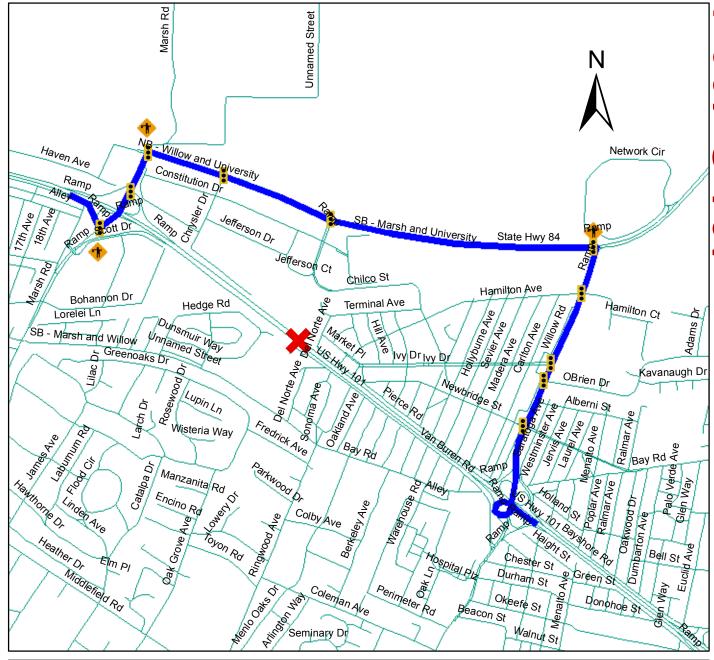


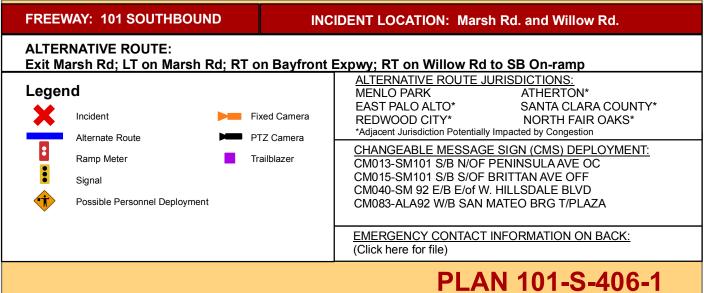


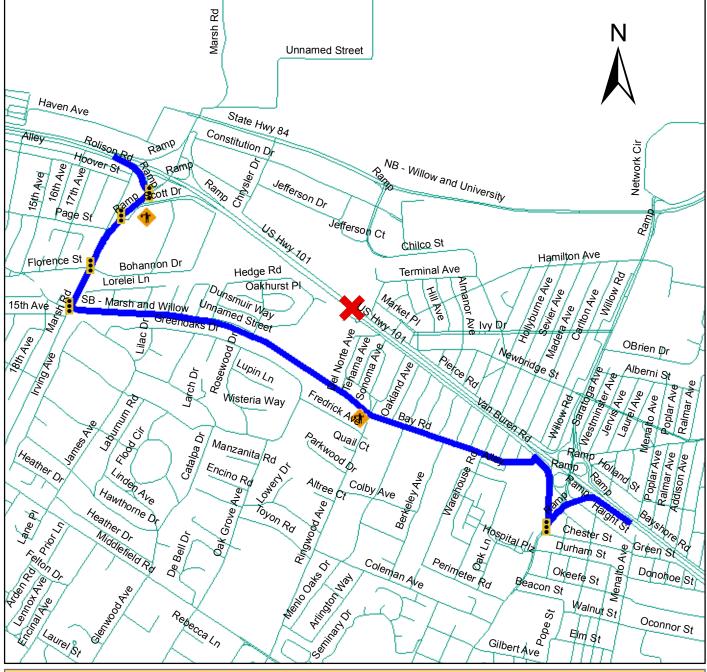
PLAN 101-S-408-1

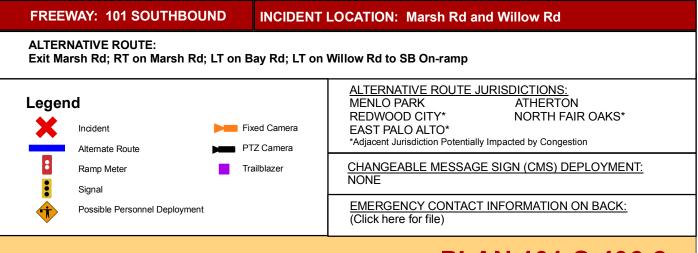




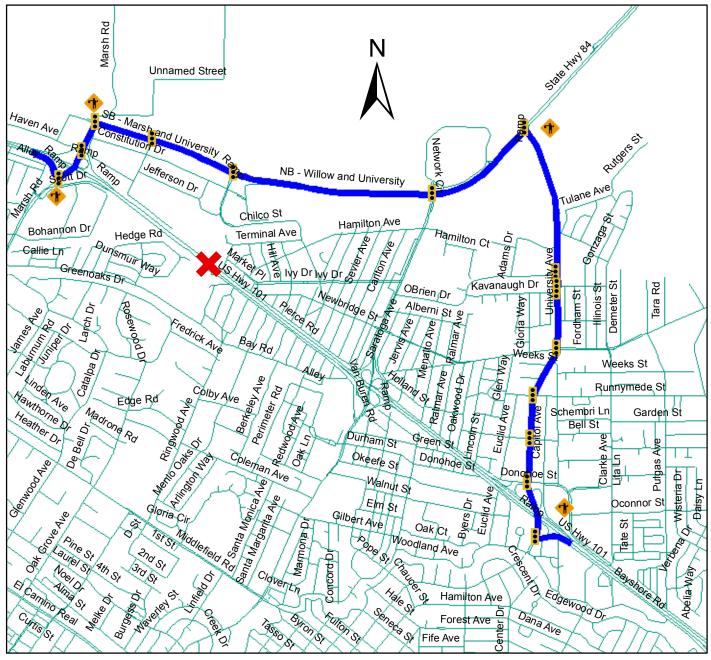


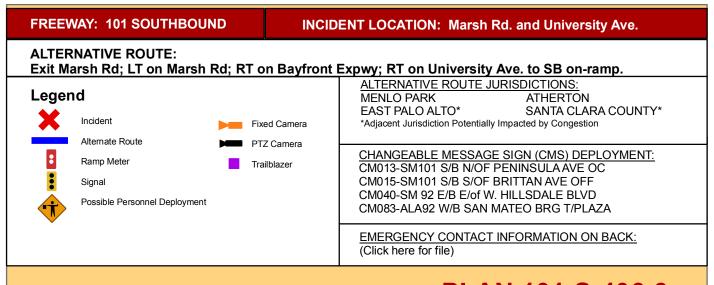


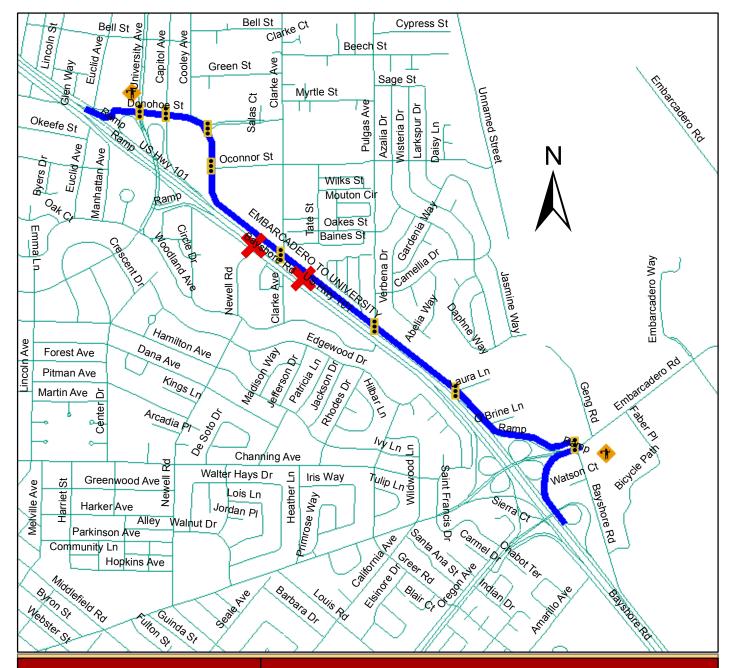




PLAN 101-S-406-2





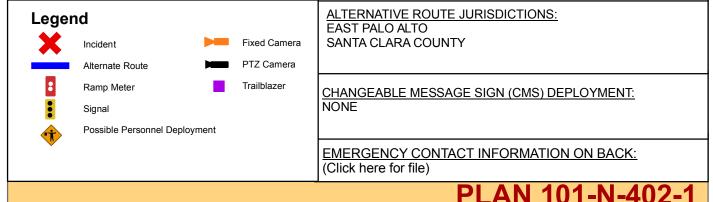


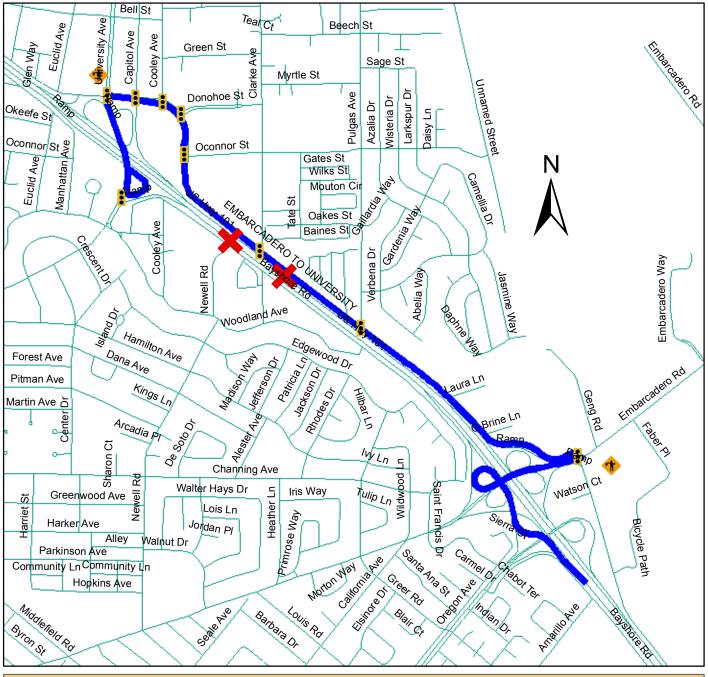
FREEWAY: 101 NORTHBOUND

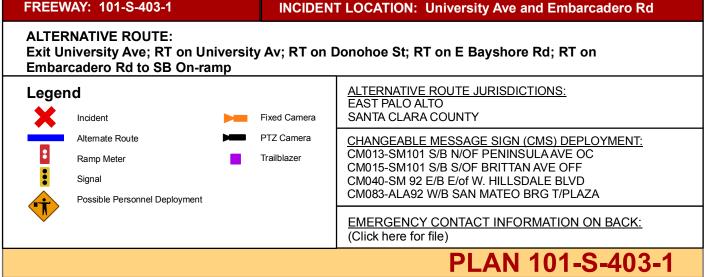
**INCIDENT LOCATION: Embarcadero Rd. and University Ave.** 

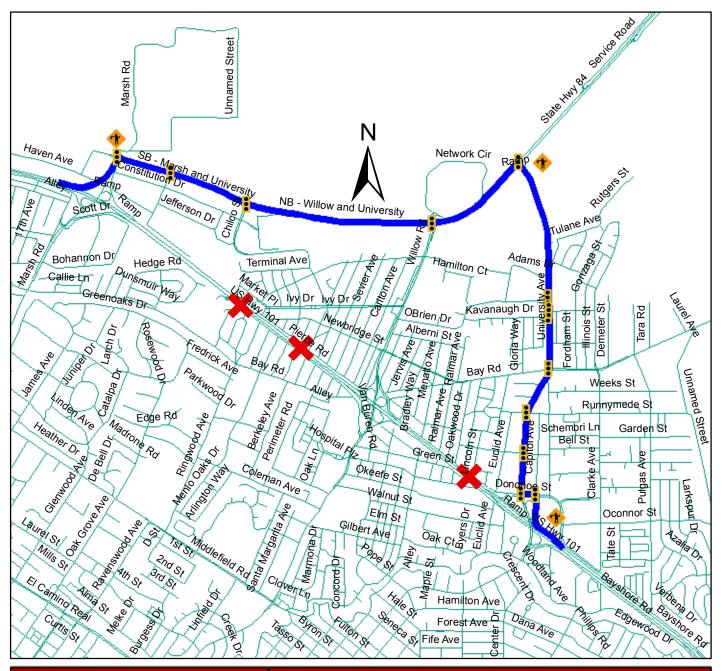
## **ALTERNATIVE ROUTE:**

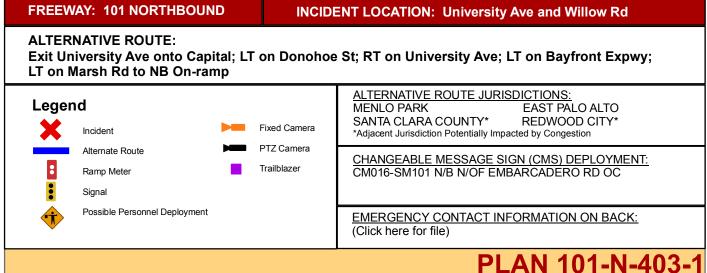
Exit EB Embarcadero Rd.; LT on E. Bayshore Blvd.; LT on Donohoe St. to NB on-ramp

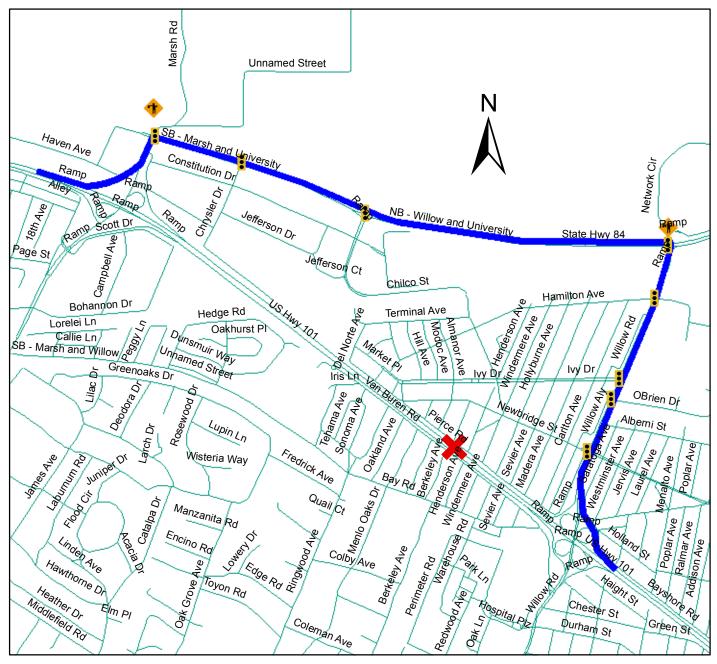


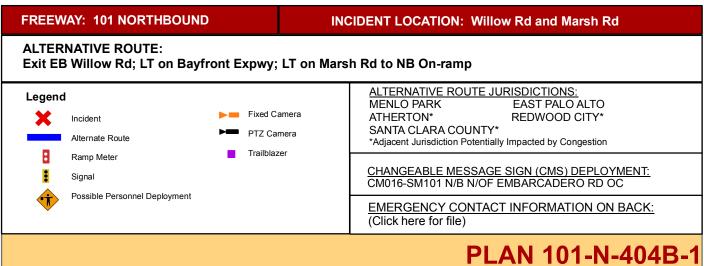


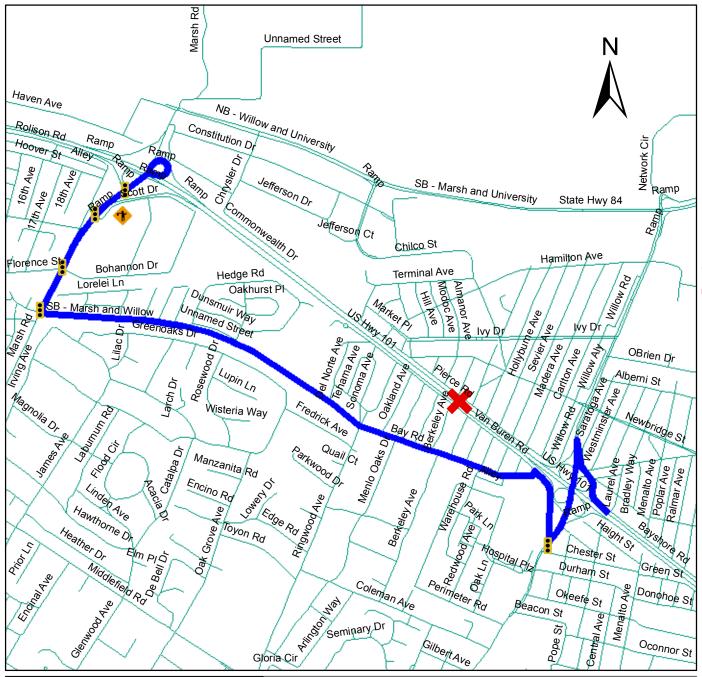


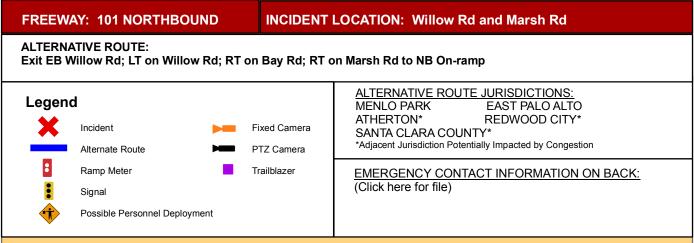


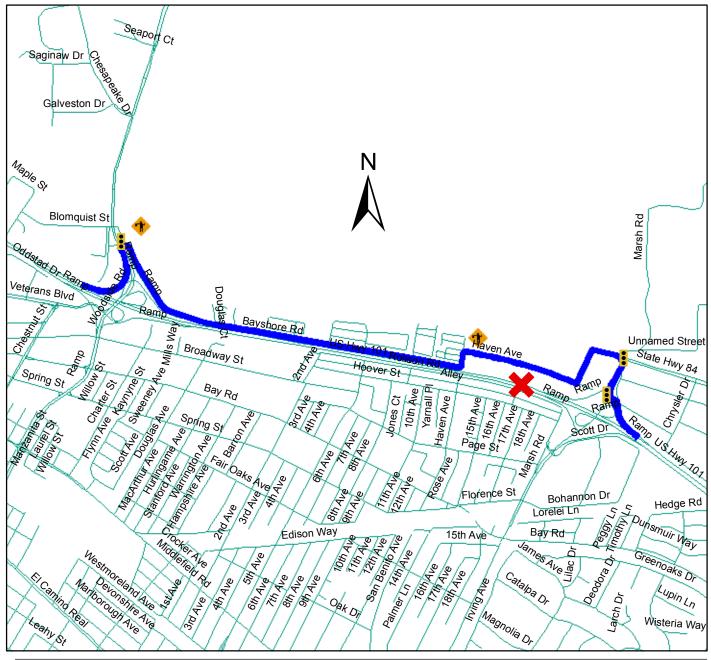


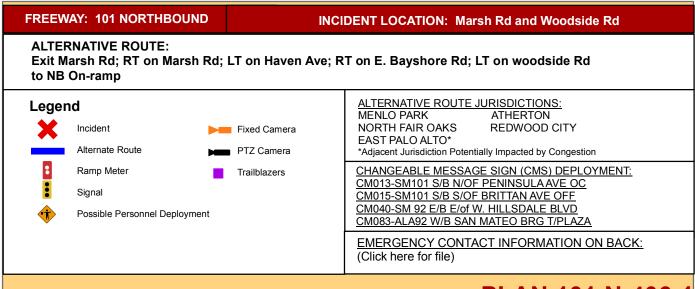


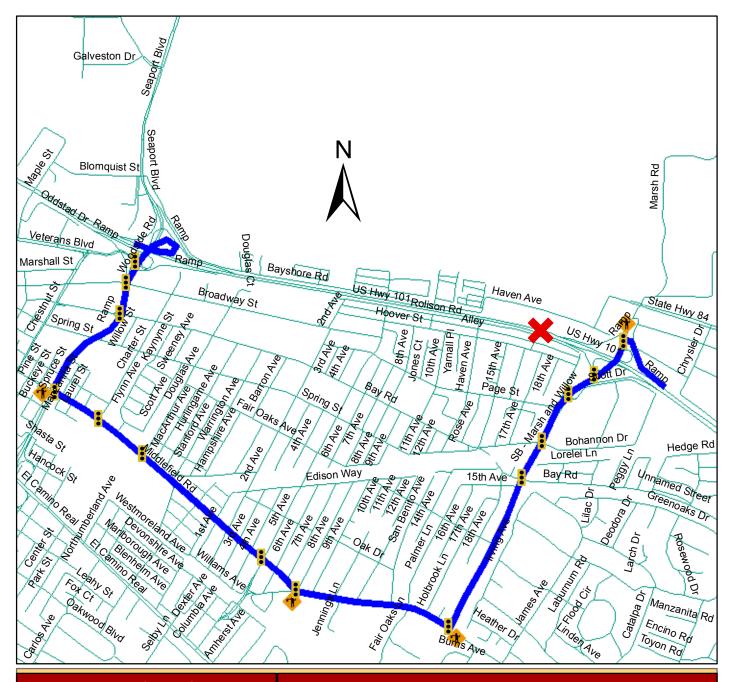


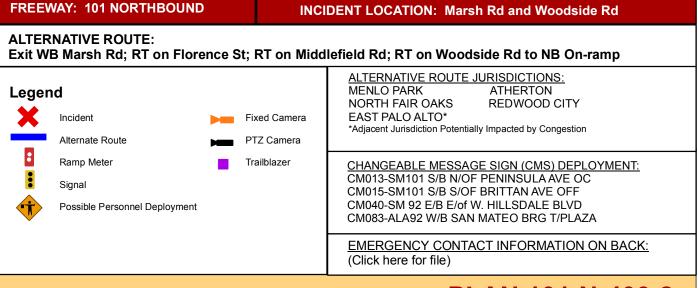


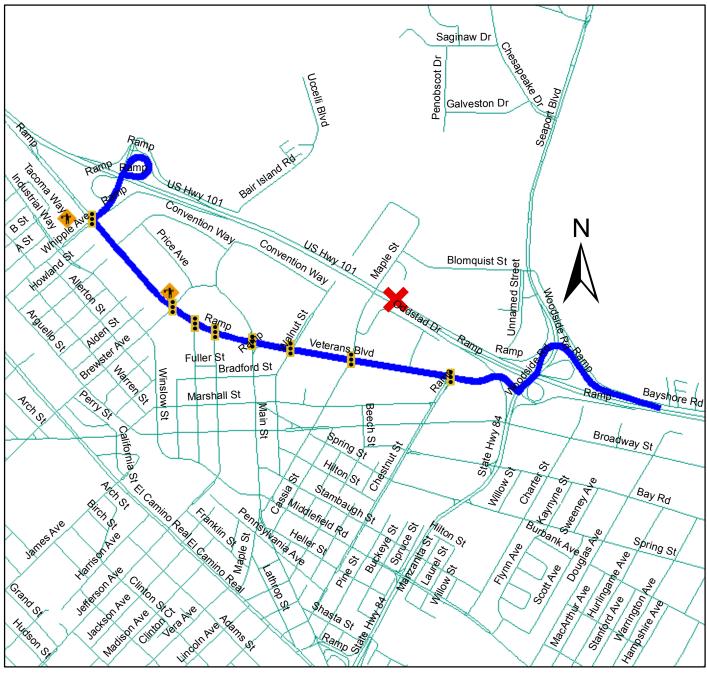


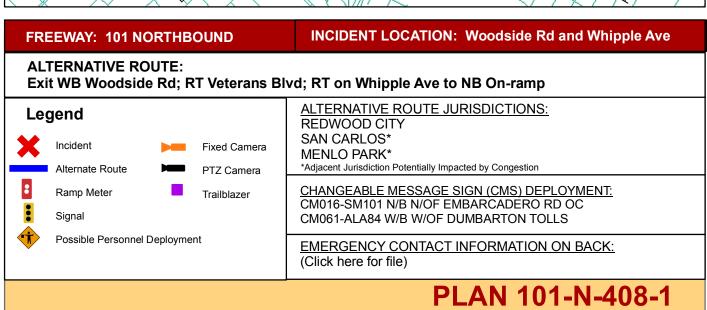


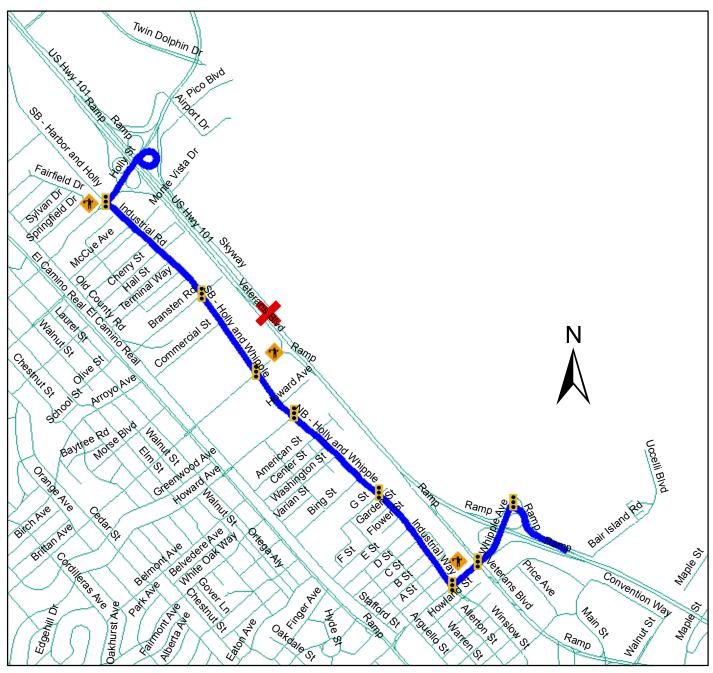


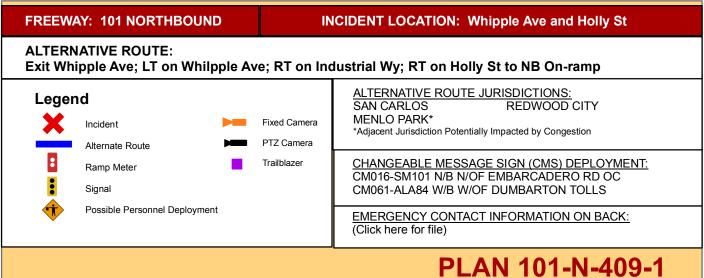


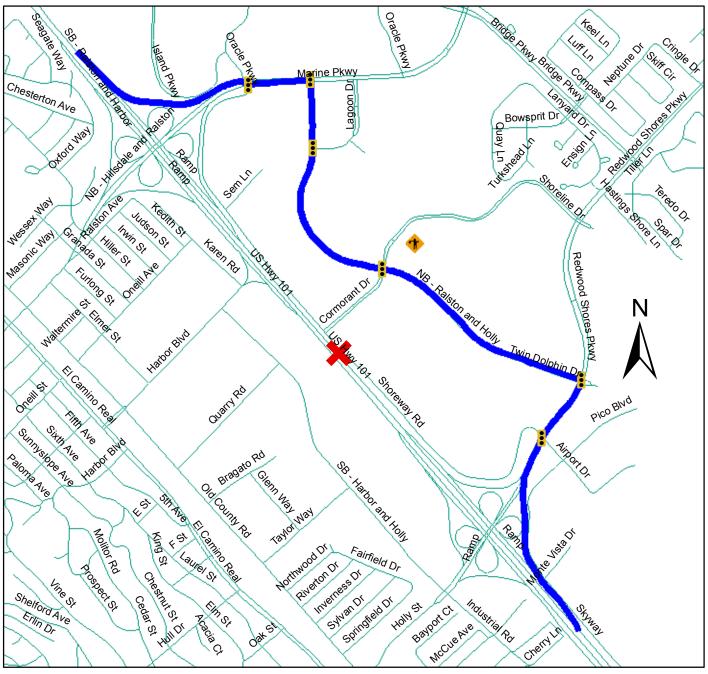


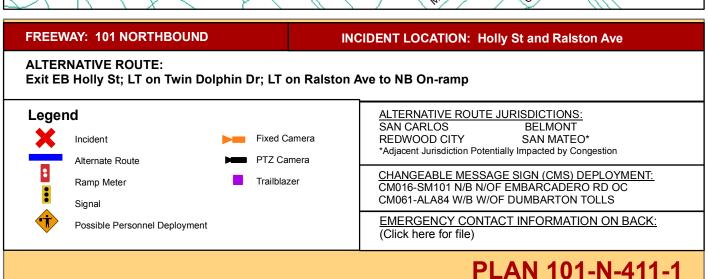


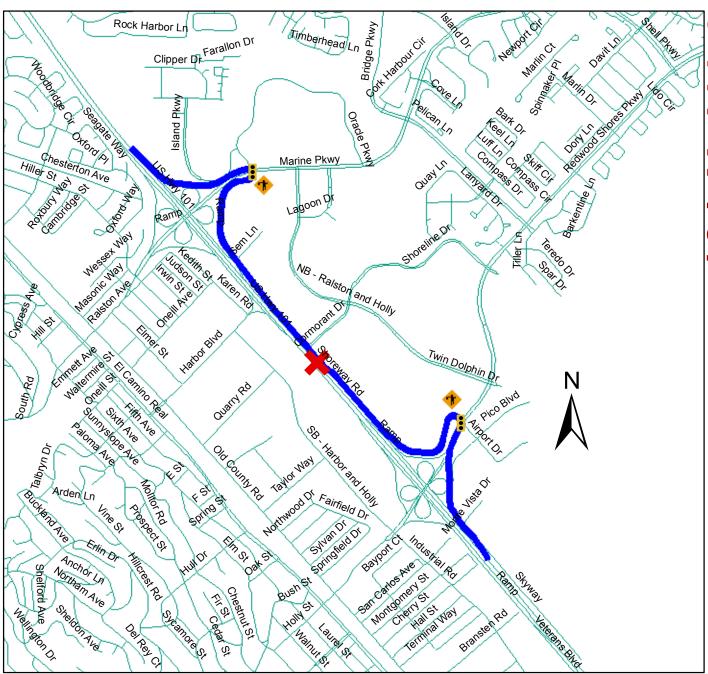


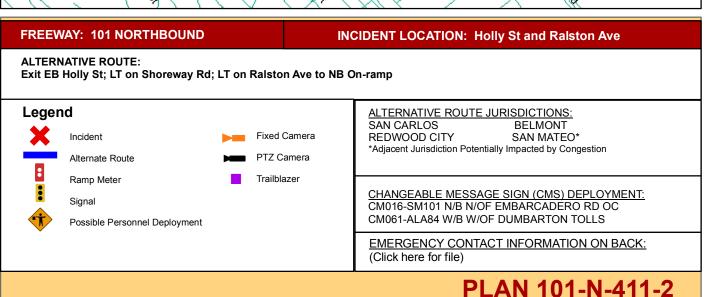




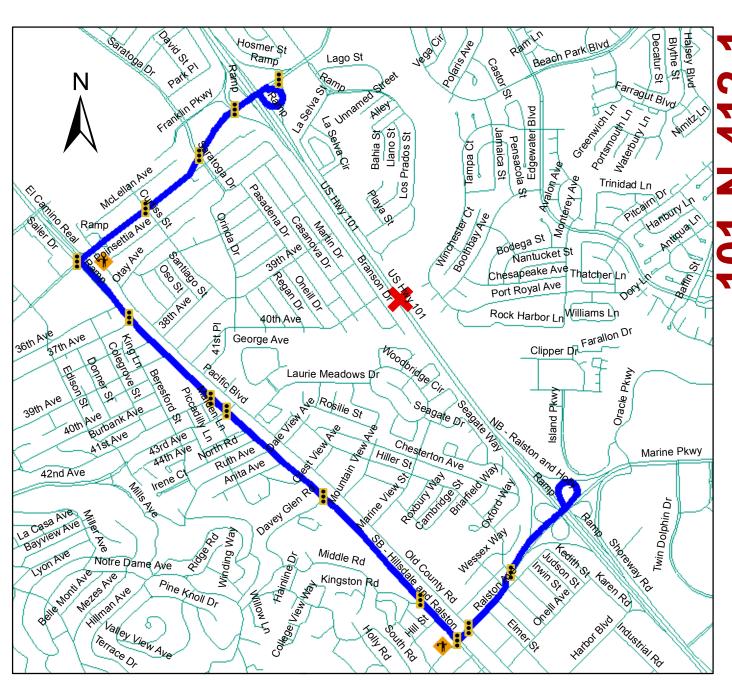


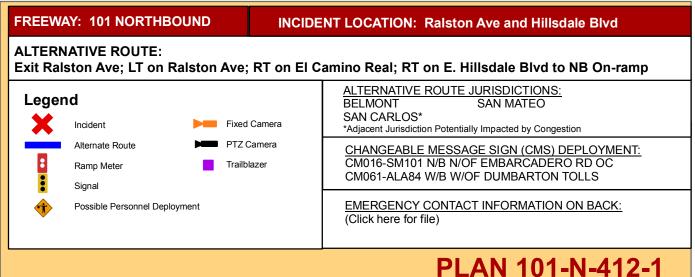


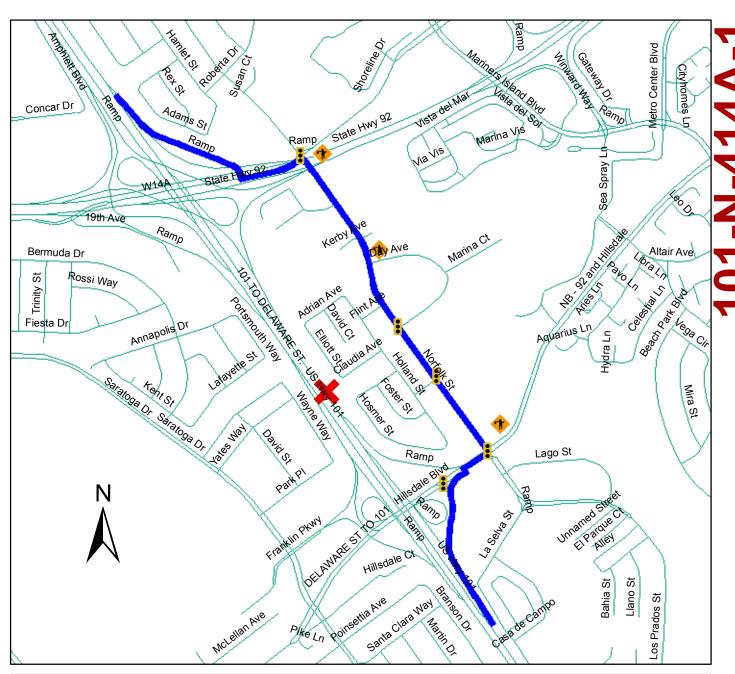


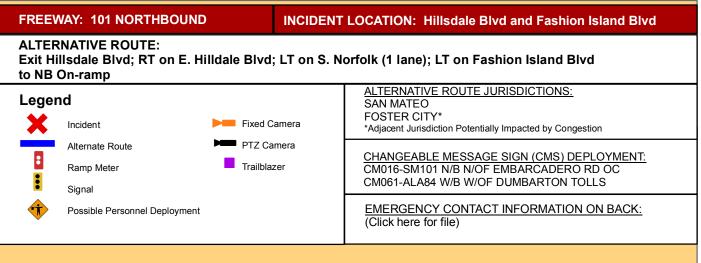


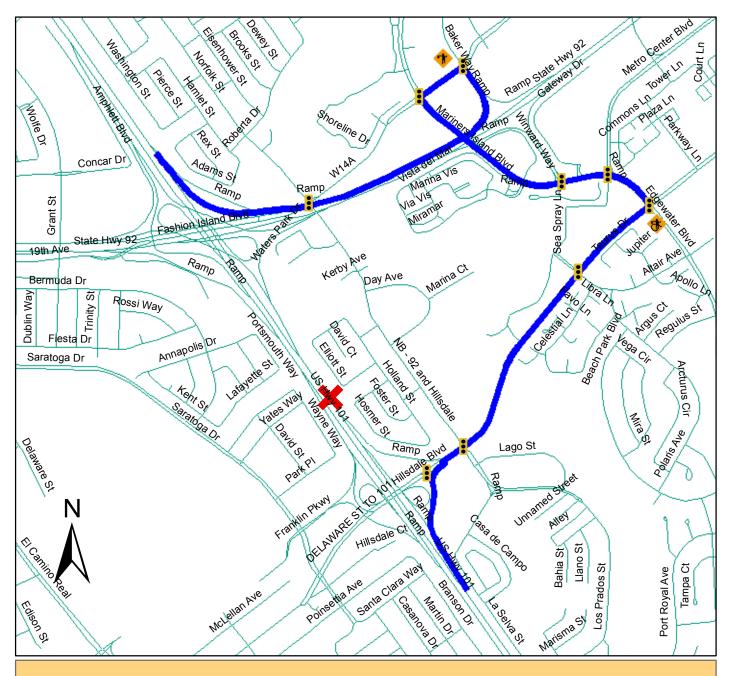
**REVISION DATE 12/18/07** 

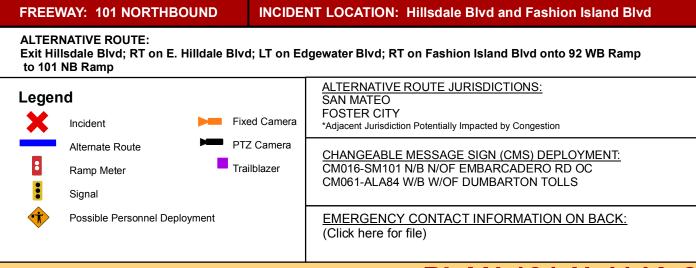


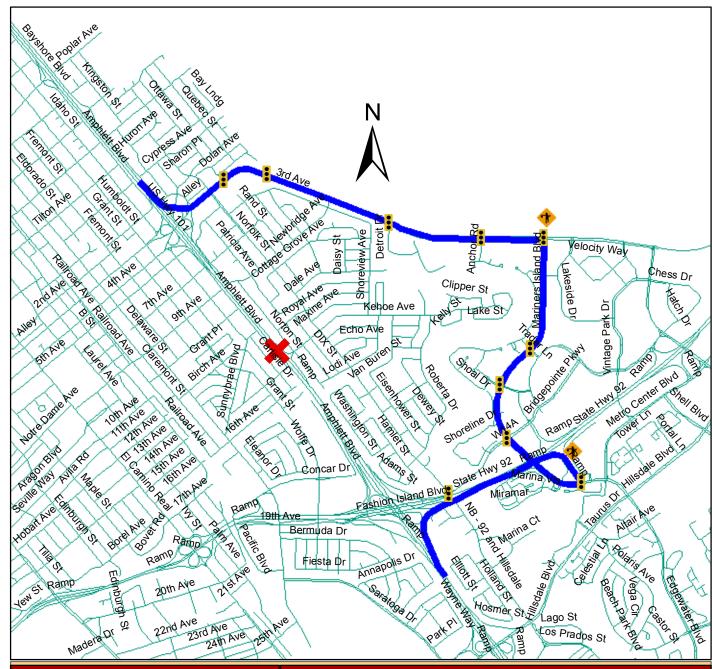












ALTERNATIVE ROUTE:
Exit EB SR 92; Exit Mariners Island Blvd; RT on Mariner island Blvd; LT on E. 3rd Ave to NB On-ramp

ALTERNATIVE ROUTE JURISDICTIONS:

Incident
Alternate Route
Ramp Meter
Signal
Possible Personnel Deployment

Fixed Camera

Trailblazer

FREEWAY: 101 NORTHBOUND

ALTERNATIVE ROUTE JURISDICTIONS: SAN MATEO FOSTER CITY\*

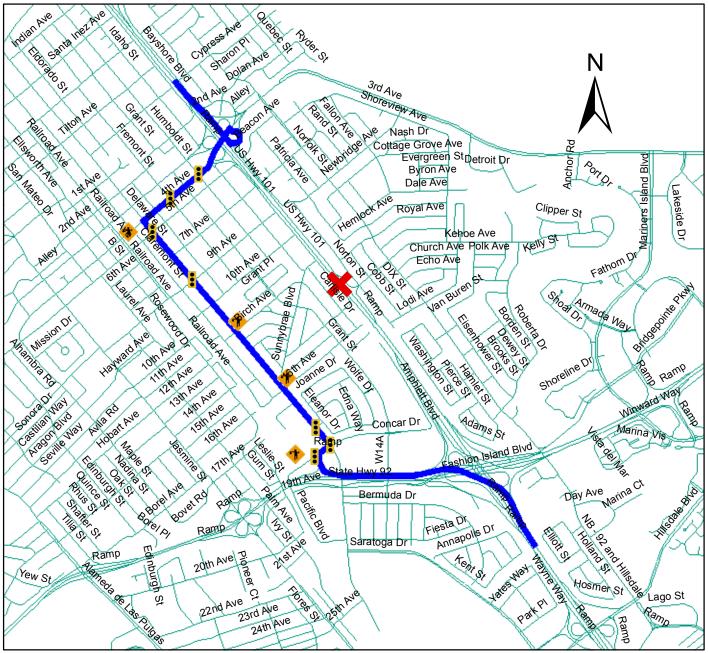
INCIDENT LOCATION: WB State Route 92 and E. 3rd Ave

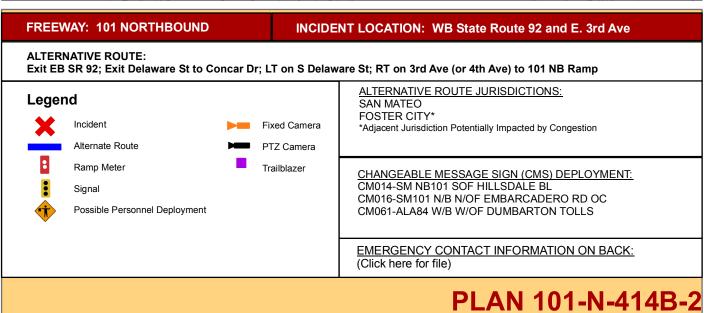
\*Adjacent Jurisdiction Potentially Impacted by Congestion

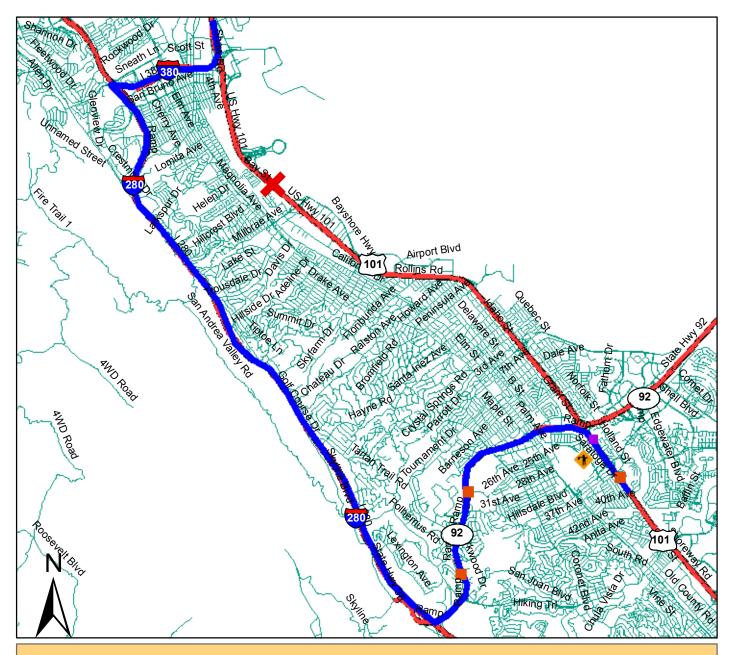
CHANGEABLE MESSAGE SIGN (CMS) DEPLOYMENT: CM014-SM NB101 SOF HILLSDALE BL CM016-SM101 N/B N/OF EMBARCADERO RD OC CM061-ALA84 W/B W/OF DUMBARTON TOLLS

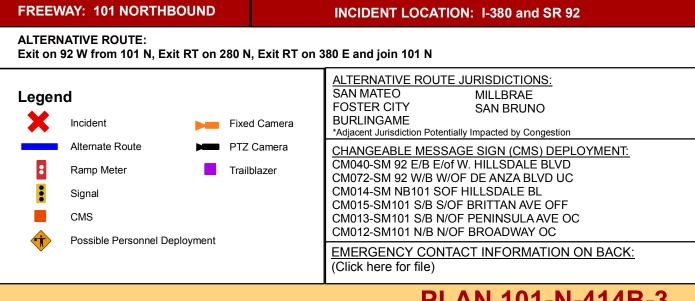
EMERGENCY CONTACT INFORMATION ON BACK: (Click here for file)

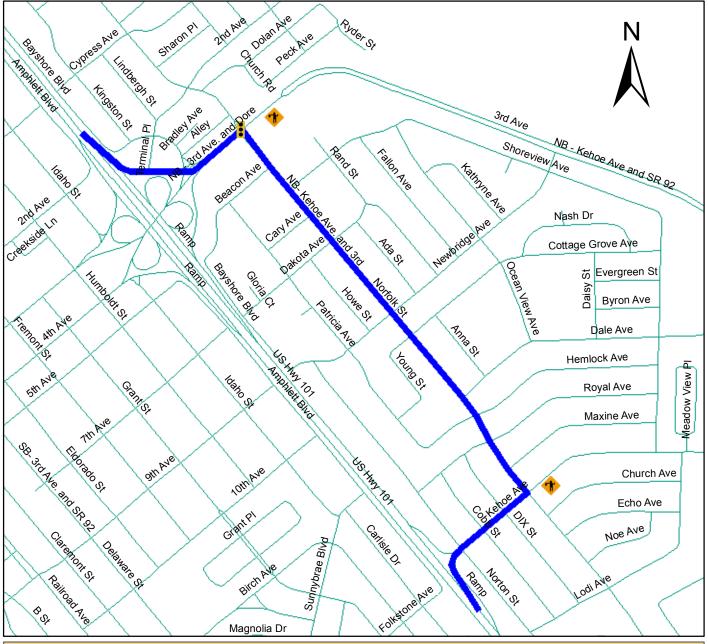
PLAN 101-N-414B-1

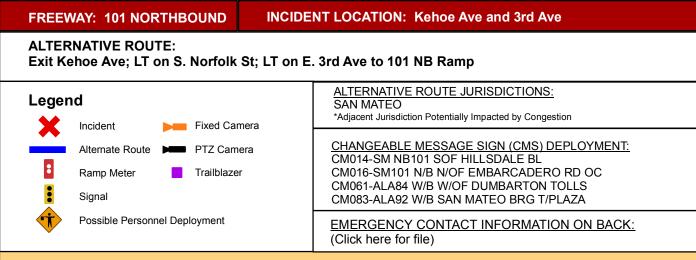


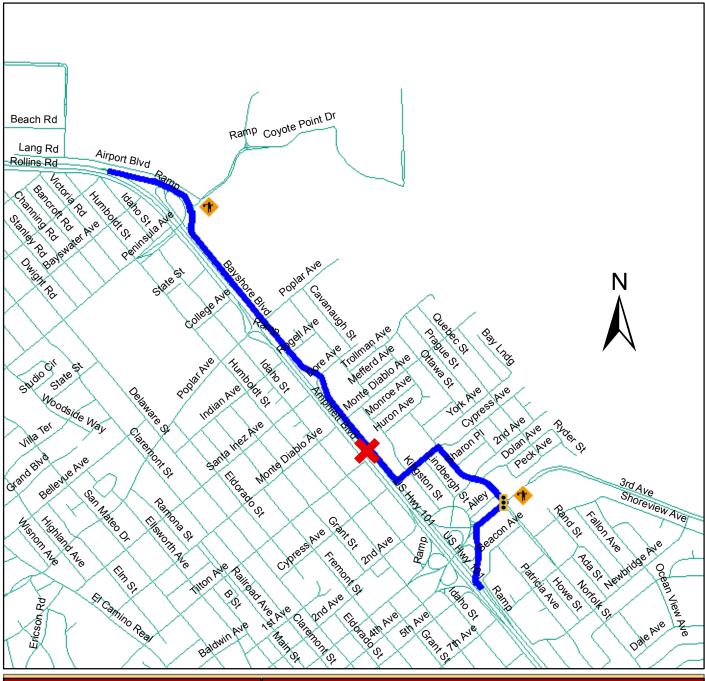


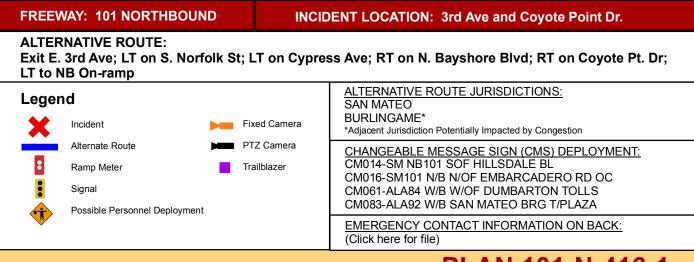


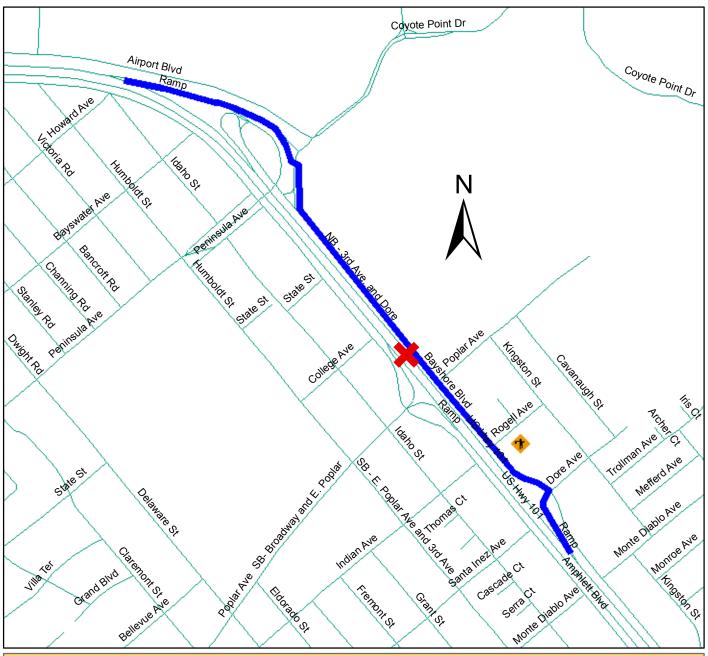


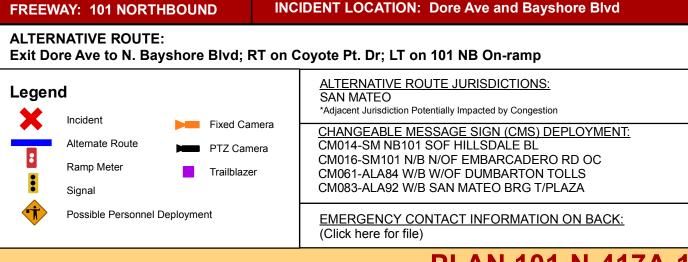


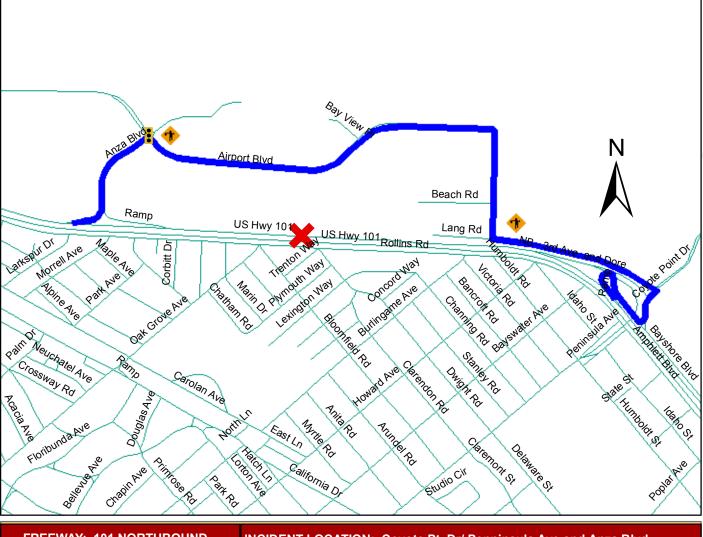


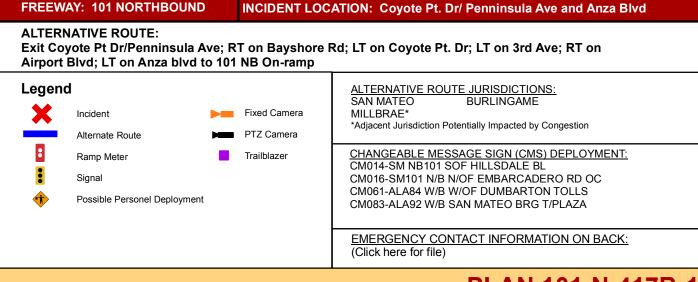


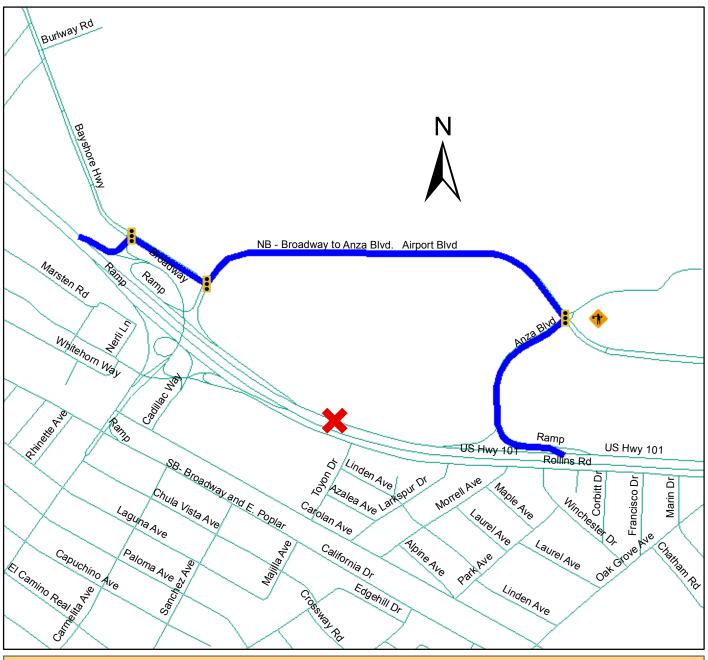


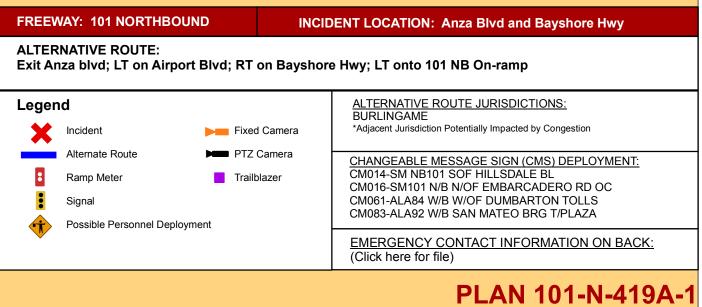


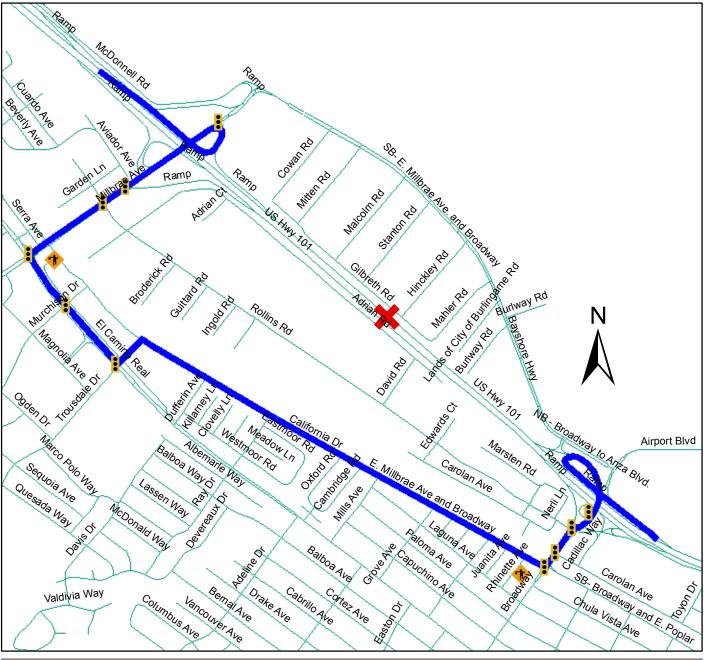


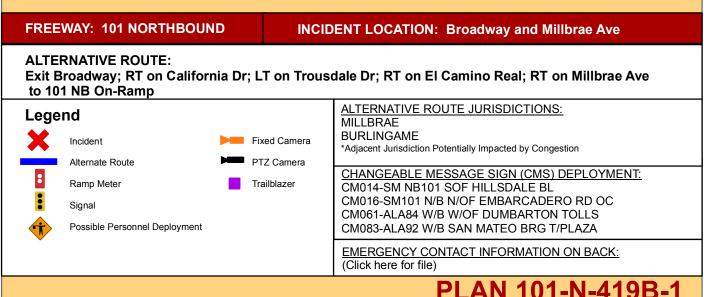


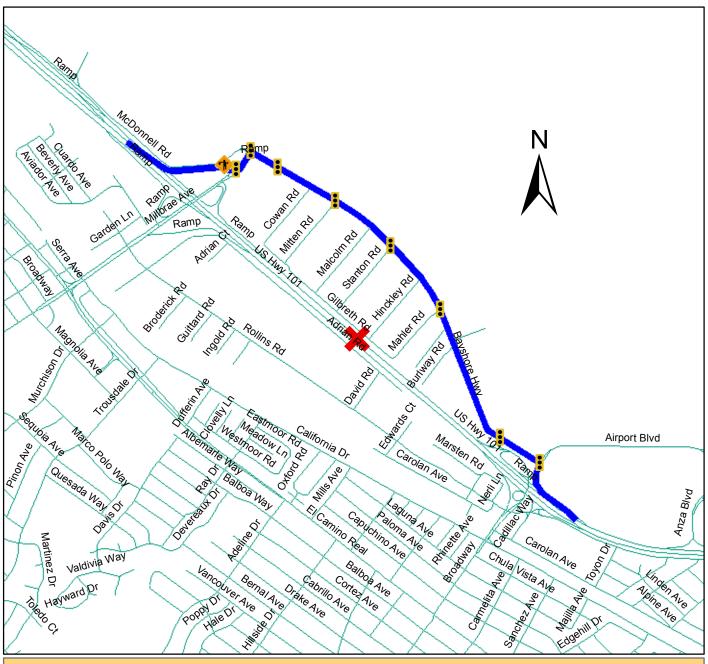


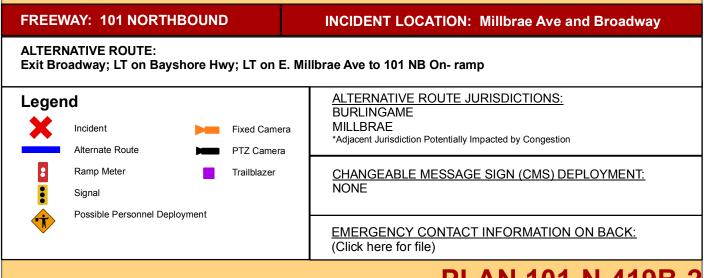


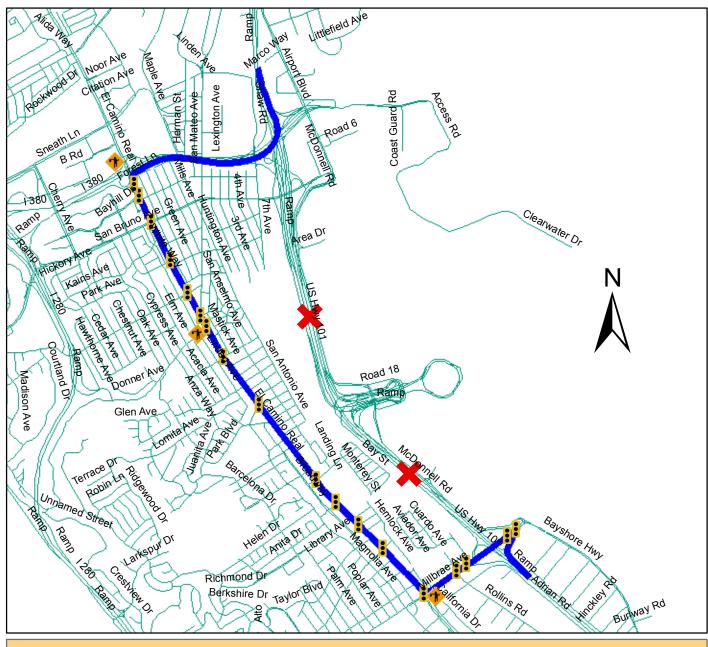












**ALTERNATIVE ROUTE:** Exit E. Millbrae Ave; LT on E. E. Millbrae Ave; RT on El Camino Real to EB I-380 On-ramp to NB 101 On-ramp **ALTERNATIVE ROUTE JURISDICTIONS:** Legend MILLBRAE SAN BRUNO SOUTH SAN FRANCISCO Incident Fixed Camera \*Adjacent Jurisdiction Potentially Impacted by Congestion PT7 Camera Alternate Route CHANGEABLE MESSAGE SIGN (CMS) DEPLOYMENT: Trailblazer Ramp Meter

FREEWAY: 101 NORTHBOUND

Signal

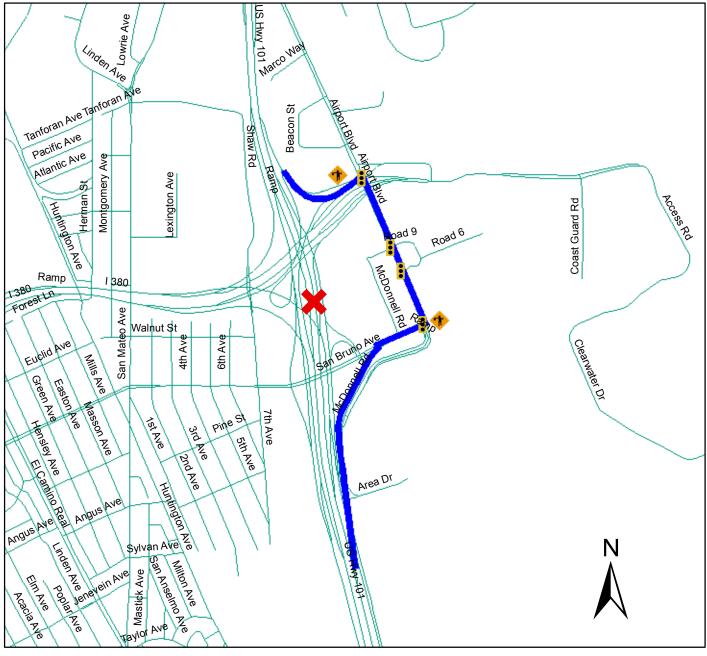
Possible Personnel Deployment

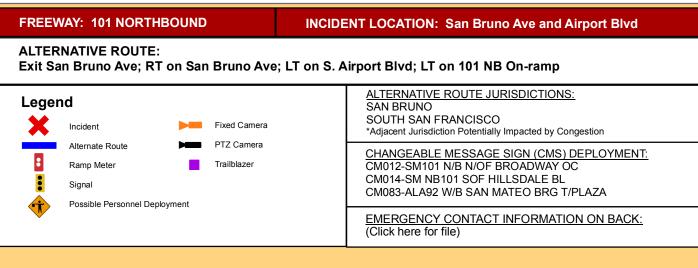
CM012-SM101 N/B N/OF BROADWAY OC CM014-SM NB101 SOF HILLSDALE BL CM083-ALA92 W/B SAN MATEO BRG T/PLAZA

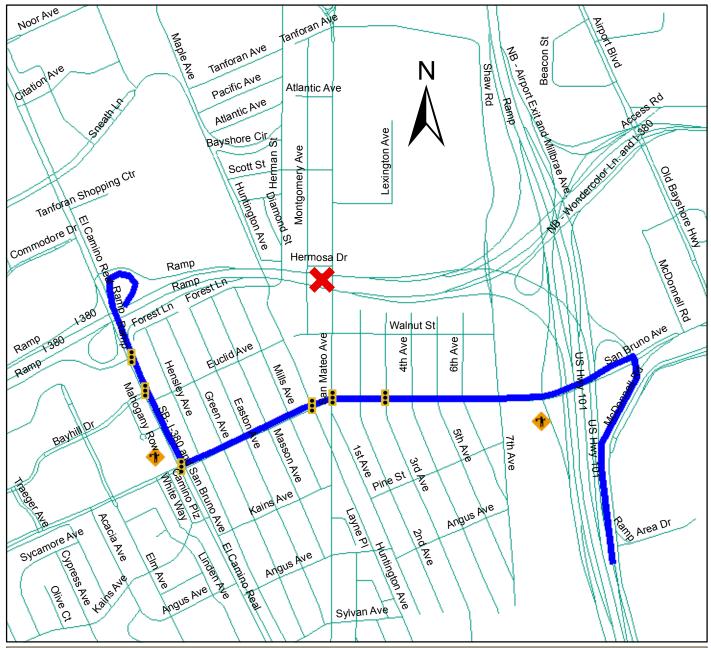
INCIDENT LOCATION: Millbrae Ave and EB Interstate 380

EMERGENCY CONTACT INFORMATION ON BACK: (Click here for file)

## PLAN 101-N-421-1







FREEWAY: US 101 NORTHBOUND TO 380 WESTBOUND INCIDENT LOCATION: US 101 NB to I-380 WB ramp through I 380 W at El Camino Real

## **ALTERNATIVE ROUTE:**

Before I-380 W ramp; exit NB US 101 at San Bruno Ave; LTon San Bruno Ave; RT on El Camino Real; LT onto WB I-380 on-ramp.

# Incident Alternate Route Ramp Meter Signal Possible Personnel Deployment

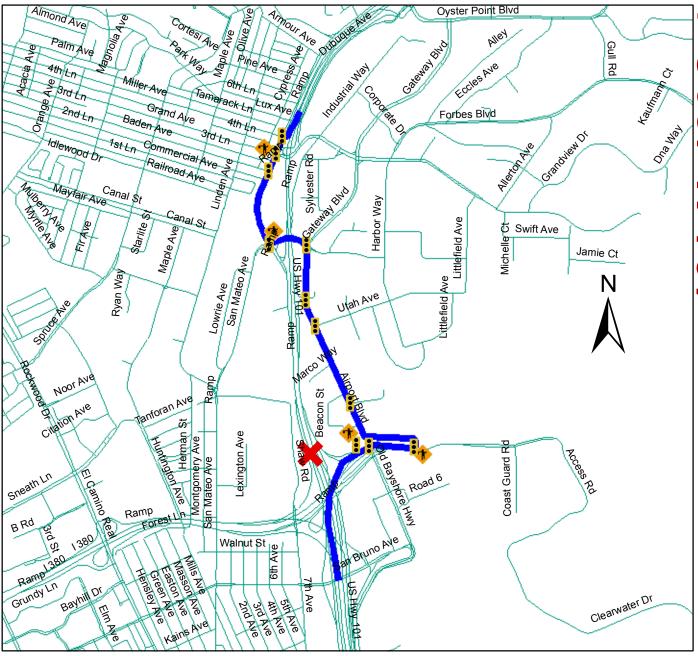
ALTERNATIVE ROUTE JURISDICTIONS: SOUTH SAN FRANCISCO\* SAN BRUNO

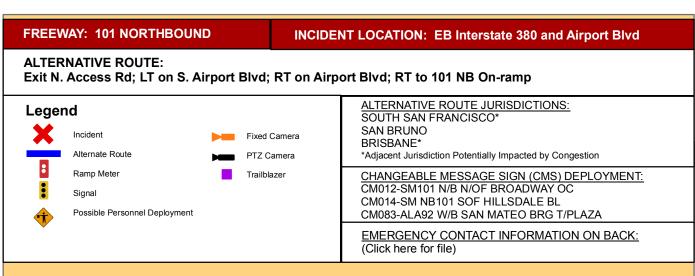
\*Adjacent Jurisdiction Potentially Impacted by Congestion

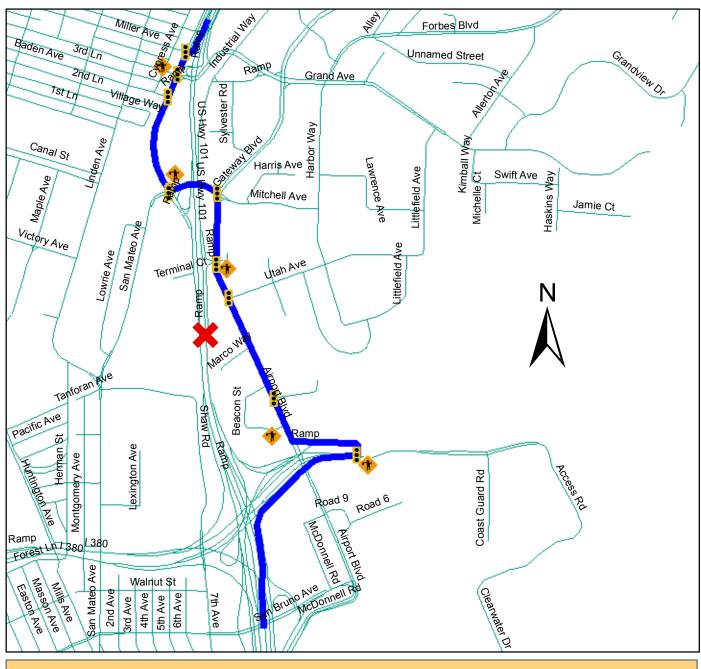
CHANGEABLE MESSAGE SIGN (CMS) DEPLOYMENT: CM011-SM101 S/B N/OF SIERRA PT RAMP OC CM012-SM101 N/B N/OF BROADWAY OC

EMERGENCY CONTACT INFORMATION ON BACK: (Click here for file)

PLAN 101-N-423A-2

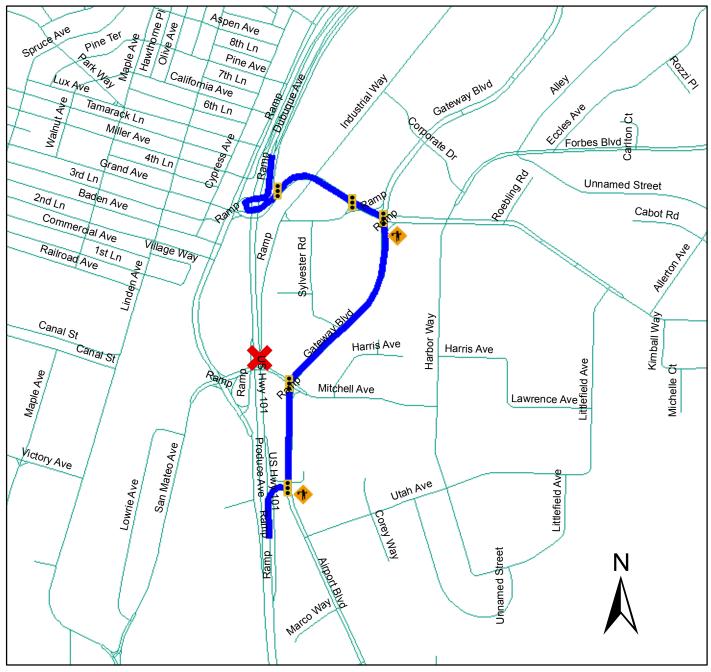


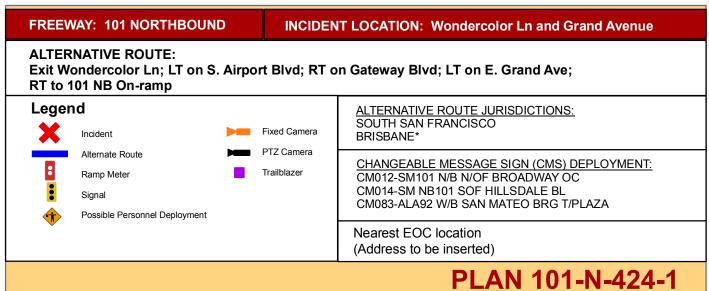


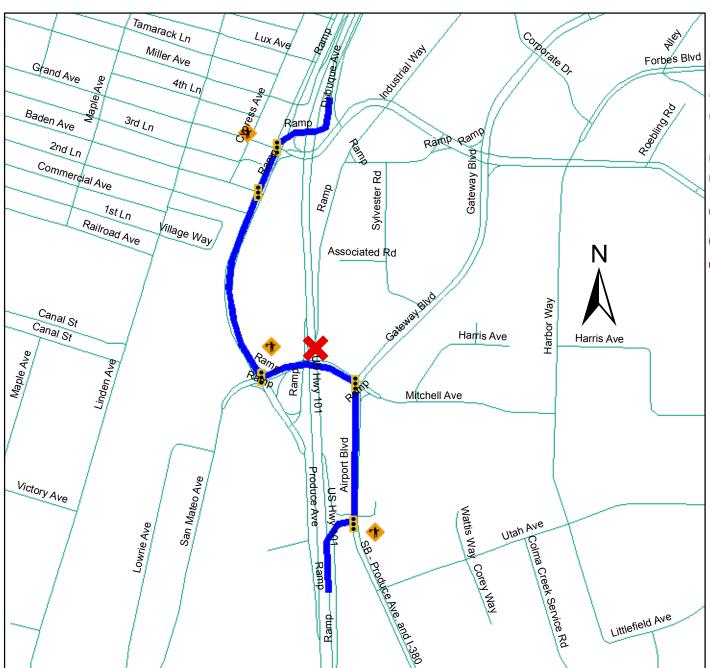


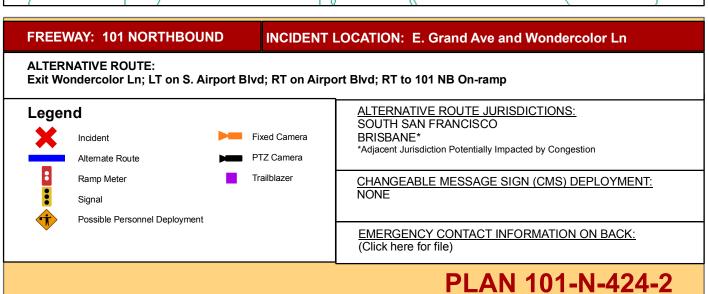
FREEWAY: 101 NORTHBOUND			INCIDENT LOCATION: Wondercolor Ln and I-380
	RNATIVE ROUTE: . Access Rd; LT on A	Access Rd; RT on Airp	port Blvd; Continue on Airport Blvd to NB On-ramp
Legend			ALTERNATIVE ROUTE JURISDICTIONS: South San Francisco
Incide	Incident	Fixed Camera	*Adjacent Jurisdiction Potentially Impacted by Congestion
	Alternate Route	PTZ Camera	CHANGEABLE MESSAGE SIGN (CMS) DEPLOYMENT:
:	Ramp Meter	Trailblazer	NONE
	Signal		
1	Possible Personnel Deployment		
Ť			EMERGENCY CONTACT INFORMATION ON BACK: (Click here for file)
			DI ANI 404 NI 4000 0

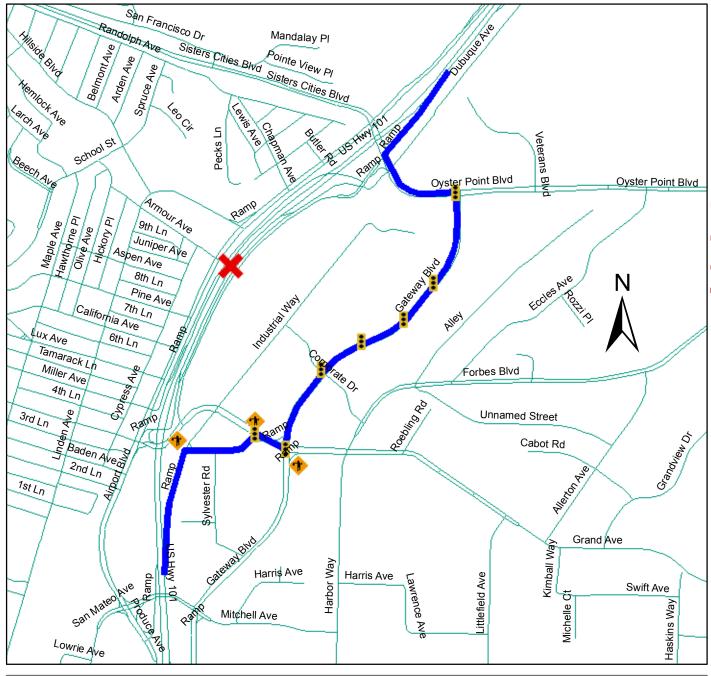
PLAN 101-N-423C-2

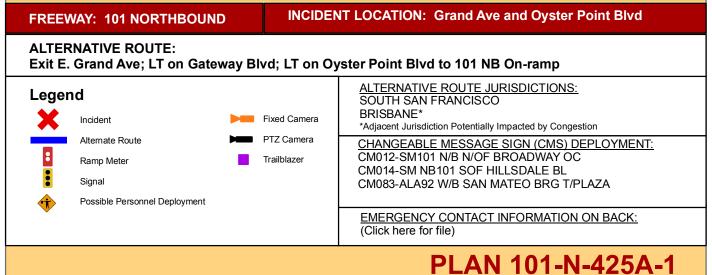


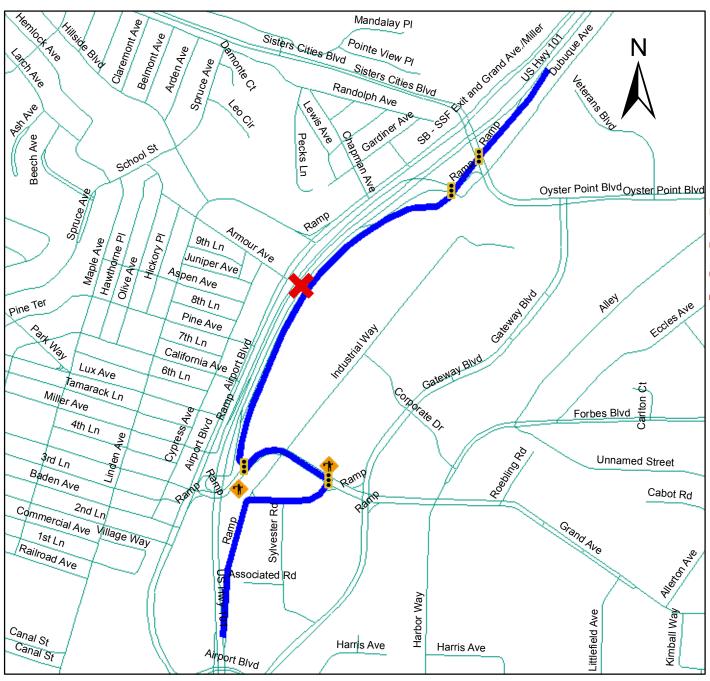


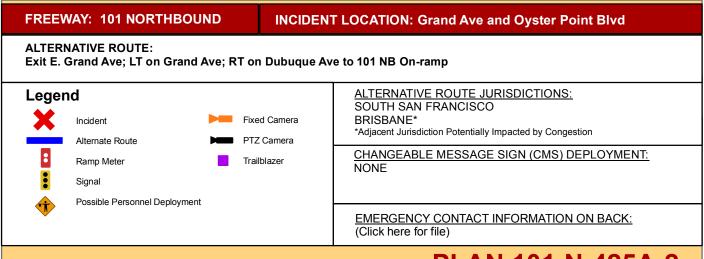




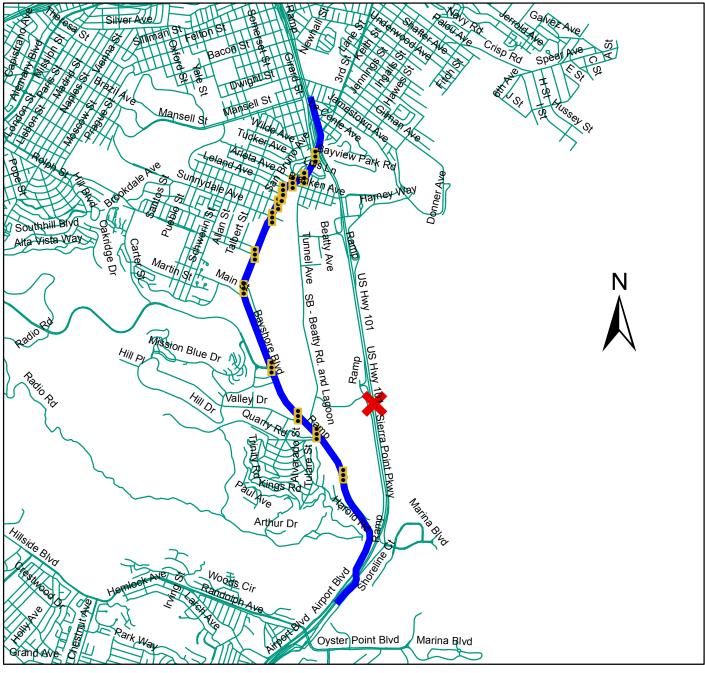


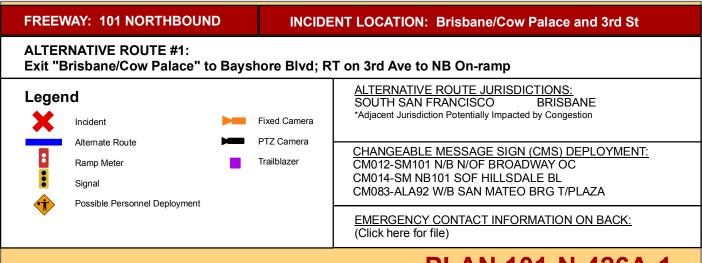


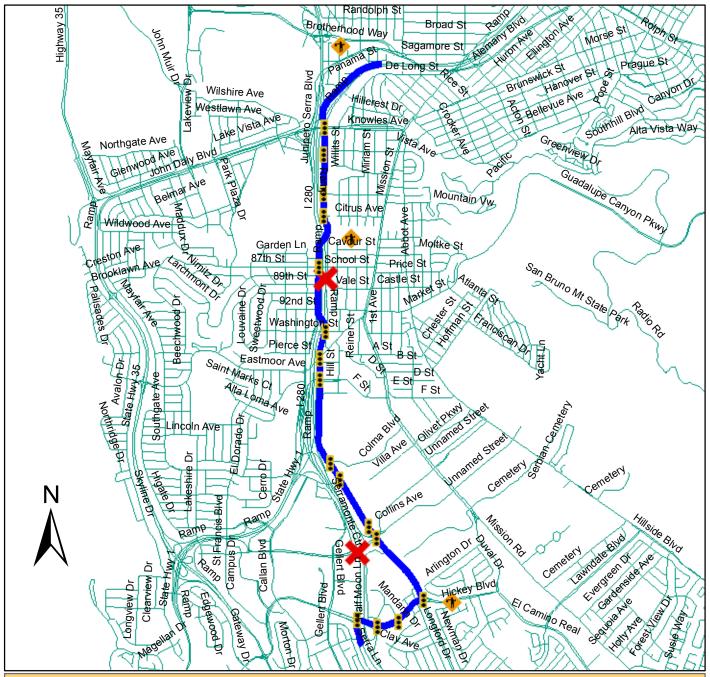




PLAN 101-N-425A-2





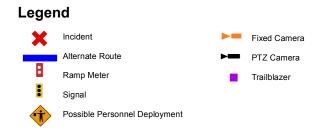


FREEWAY: 280 SOUTHBOUND

**INCIDENT LOCATION: John Daly Blvd and Hickey Blvd** 

### **ALTERNATIVE ROUTE:**

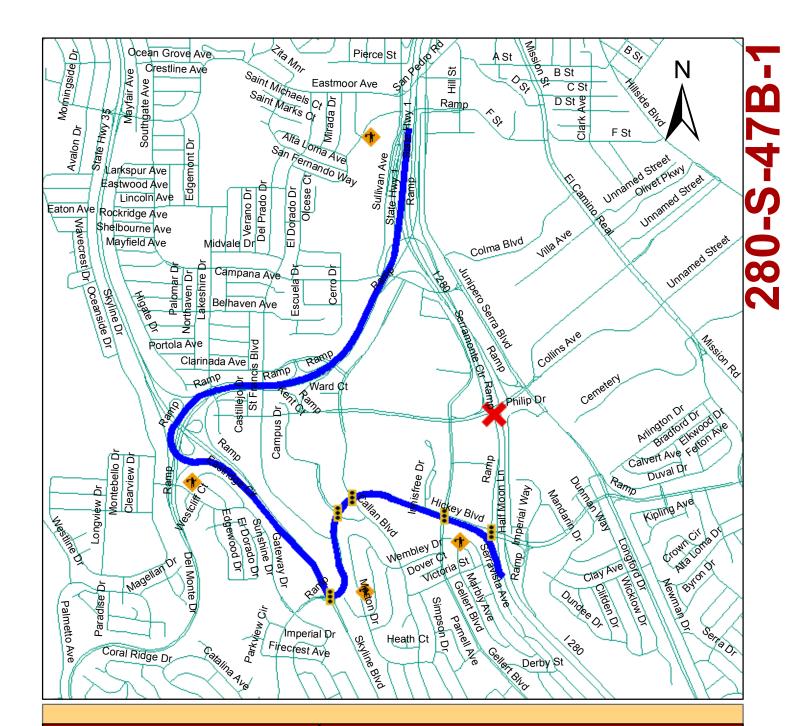
Exit John Daly Blvd. Straight onto Junipero Serra Blvd. RT on Hickey Blvd. LT onto I-280 On-Ramp.

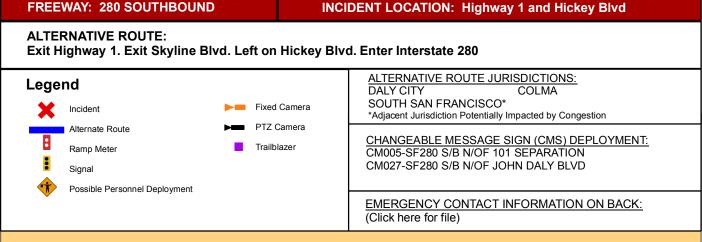


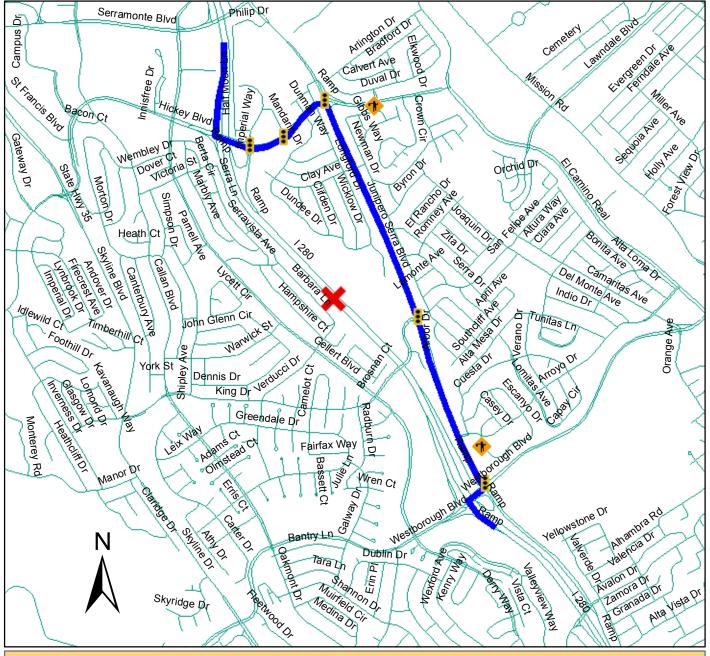
ALTERNATIVE ROUTE JURISDICTIONS:
DALY CITY
SOUTH SAN FRANCISCO
COLMA
\*Adjacent Jurisdiction Potentially Impacted by Congestion

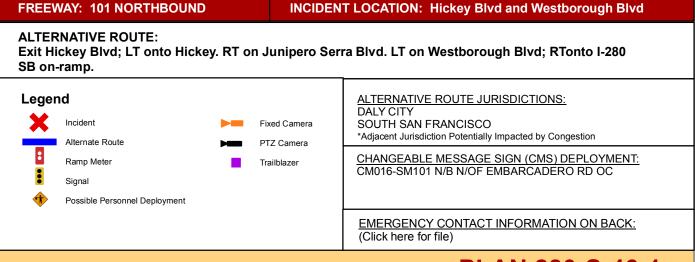
CHANGEABLE MESSAGE SIGN (CMS) DEPLOYMENT: CM005-SF280 S/B N/OF 101 SEPARATION CM027-SF280 S/B N/OF JOHN DALY BLVD

EMERGENCY CONTACT INFORMATION ON BACK: (Click here for file)

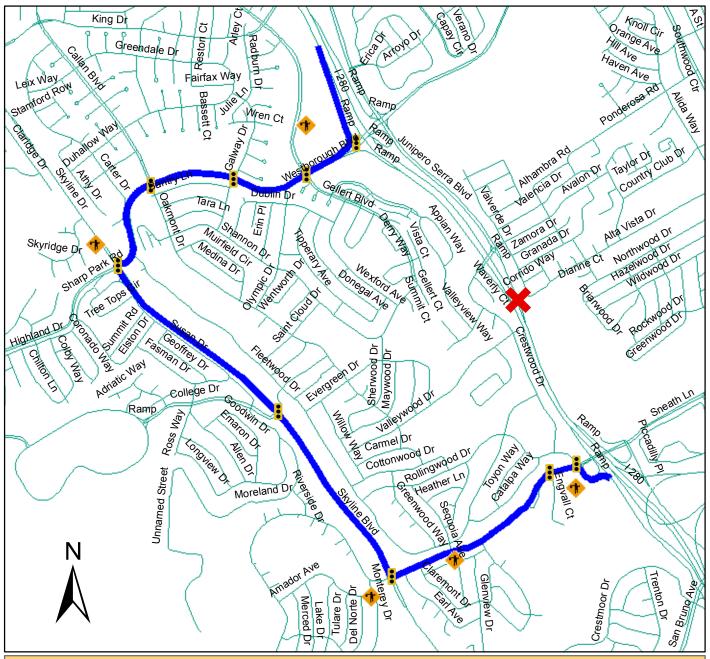








PLAN 280-S-46-1



ALTERNATIVE ROUTE:
Exit Westborough Blvd and merge RT onto Westborough. LT on Skyline Blvd. LT on Sneath Lane. RT onto SB I-280 on-ramp.

Legend

ALTERNATIVE ROUTE JURISDICTIONS:
SOUTH SAN FRANCISCO

Incident

Alternate Route

Ramp Meter

Signal

Possible Personnel Deployment

FREEWAY: 280 SOUTHBOUND

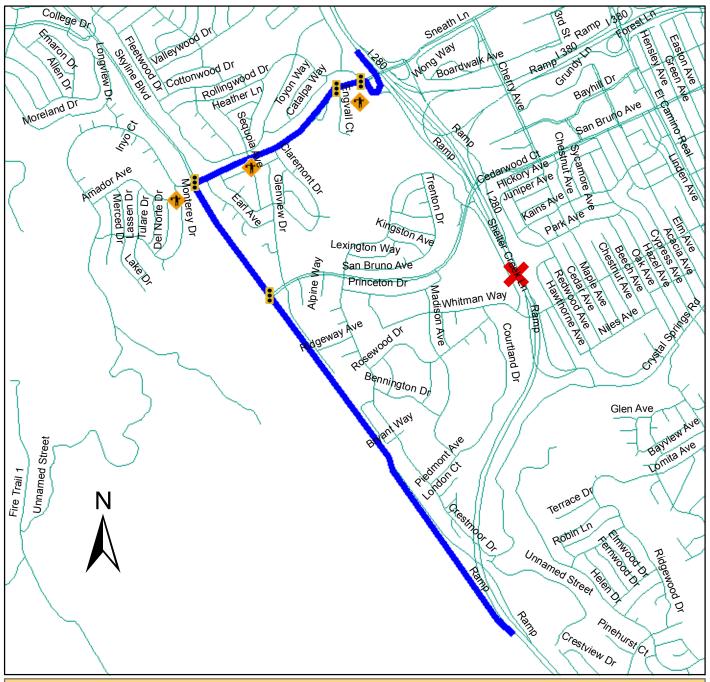
SOUTH SAN FRANCISCO
SAN BRUNO
MILLBRAE\*
\*Adjacent Jurisdiction Potentially Impacted by Congestion

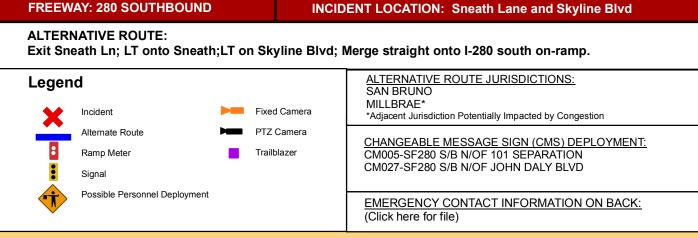
INCIDENT LOCATION: Westborough Blvd and Sneath Ln

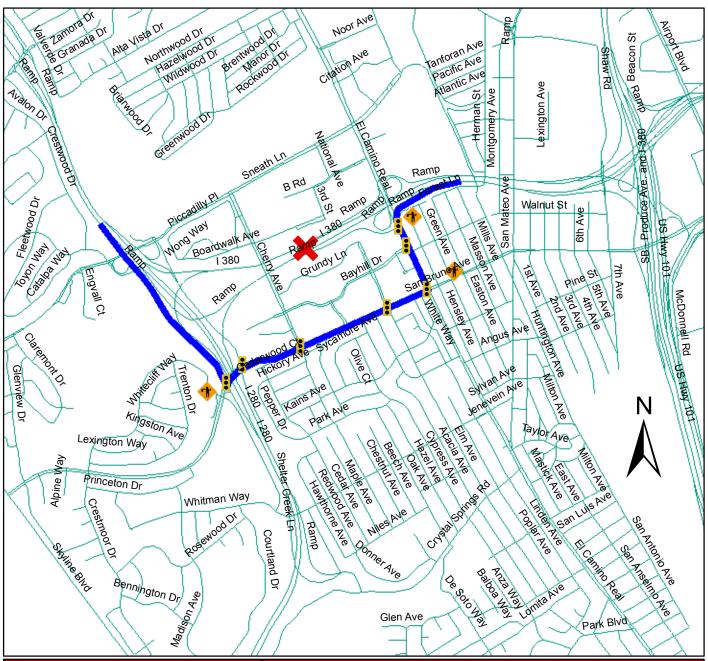
CHANGEABLE MESSAGE SIGN (CMS) DEPLOYMENT: CM005-SF280 S/B N/OF 101 SEPARATION CM027-SF280 S/B N/OF JOHN DALY BLVD

 $\underline{\mathsf{EMERGENCY}}\,\,\underline{\mathsf{CONTACT}}\,\,\underline{\mathsf{INFORMATION}}\,\,\underline{\mathsf{ON}}\,\,\underline{\mathsf{BACK}}.$  (Click here for file)

PLAN 280-S-45-1







FREEWAY: 280 SB to 380 EB

INCIDENT LOCATION: I-280 S to I-380 EB ramp through I-380 E at El Camino Real

### **ALTERNATIVE ROUTE:**

Exit SB I-280/ San Bruno Avenue; LT on San Bruno Ave; LT on El Camino Real; RT onto EB I-380 on-ramp.

## Legend Incident Alternate Route Ramp Meter Signal Possible Personnel Deployment Fixed Camera PTZ Camera Trailblazer

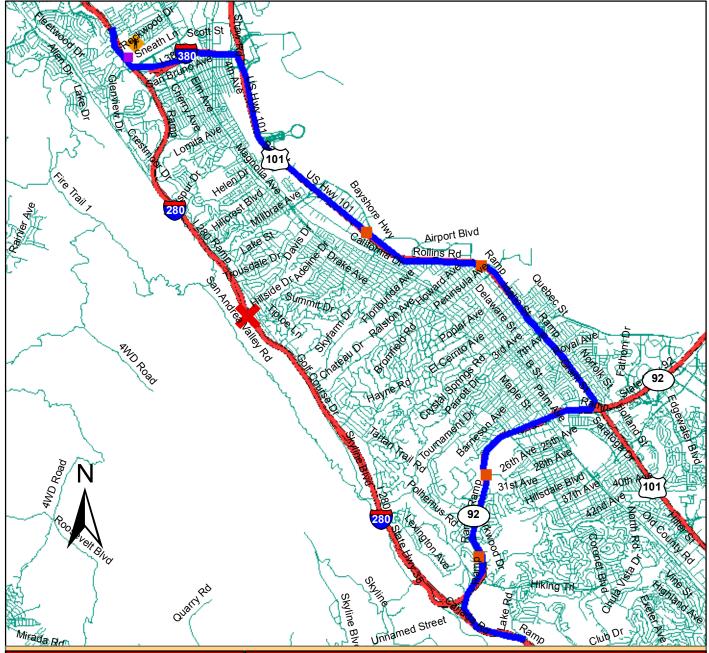
ALTERNATIVE ROUTE JURISDICTIONS: SOUTH SAN FRANCISCO\* SAN BRUNO

\*Adjacent Jurisdiction Potentially Impacted by Congestion

CHANGEABLE MESSAGE SIGN (CMS) DEPLOYMENT: None

EMERGENCY CONTACT INFORMATION ON BACK: (Click here for file)

PLAN 280-S-43B-2



FREEWAY: 280 SOUTHBOUND

INCIDENT LOCATION: I-380 and SR 92

### **ALTERNATIVE ROUTE:**

Exit on 380 E from 280 S, Exit RT on 101 S, Exit LT on 92 W and join 280 S



ALTERNATIVE ROUTE JURISDICTIONS: SAN MATEO MILLBRAE

FOSTER CITY SAN BRUNO
BURLINGAME

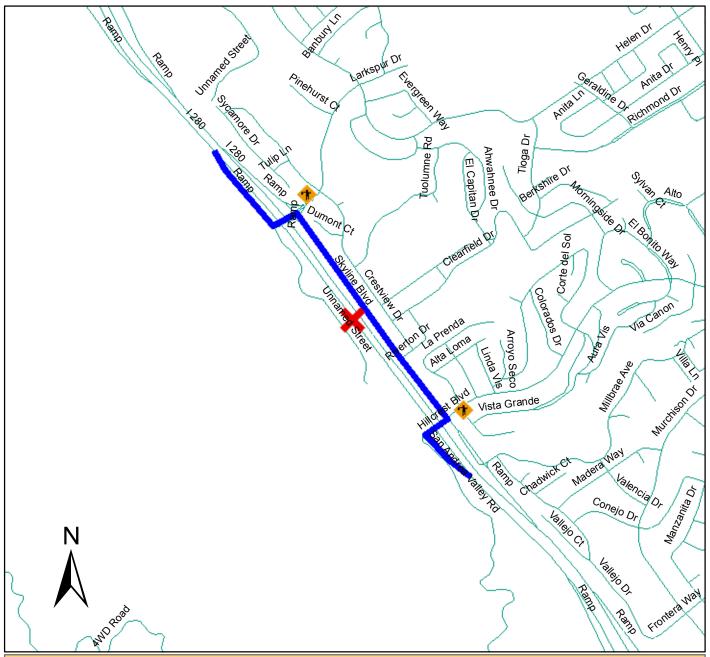
\*Adjacent Jurisdiction Potentially Impacted by Congestion

CHANGEABLE MESSAGE SIGN (CMS) DEPLOYMENT: CM072-SM 92 W/B W/OF DE ANZA BLVD UC

CM040-SM 92 E/B E/of W. HILLSDALE BLVD CM013-SM101 S/B N/OF PENINSULA AVE OC CM012-SM101 N/B N/OF BROADWAY OC

EMERGENCY CONTACT INFORMATION ON BACK: (Click here for file)

## PLAN 280-S-43A-1





### **ALTERNATIVE ROUTE:**

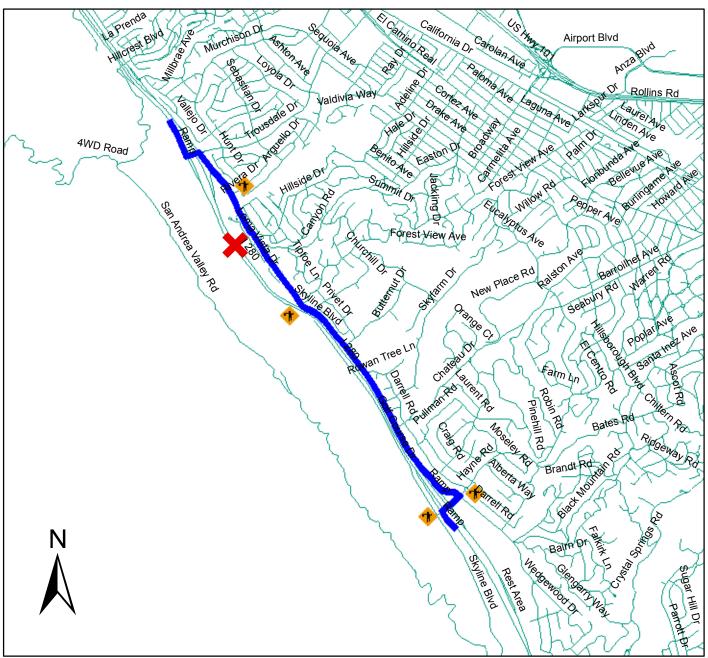
Exit Larkspur Dr; LT on Larkspur Dr; RT on Skyline Blvd; RT on Hillcrest Blvd; LT onto SB I-280 on-ramp.

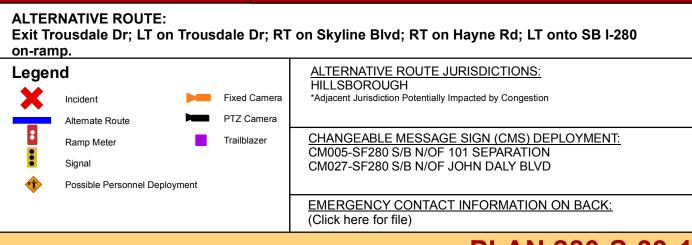


**ALTERNATIVE ROUTE JURISDICTIONS:** \*Adjacent Jurisdiction Potentially Impacted by Congestion

CHANGEABLE MESSAGE SIGN (CMS) DEPLOYMENT: CM005-SF280 S/B N/OF 101 SEPARATION CM027-SF280 S/B N/OF JOHN DALY BLVD

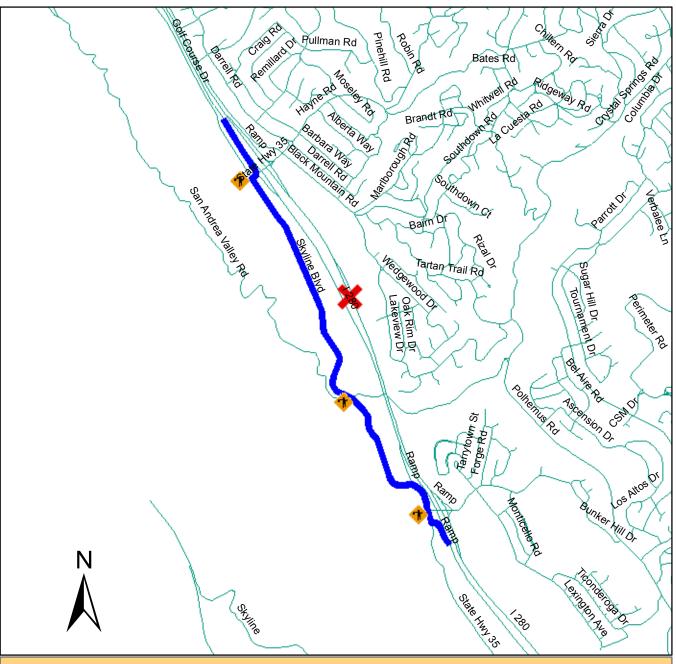
**EMERGENCY CONTACT INFORMATION ON BACK:** (Click here for file)





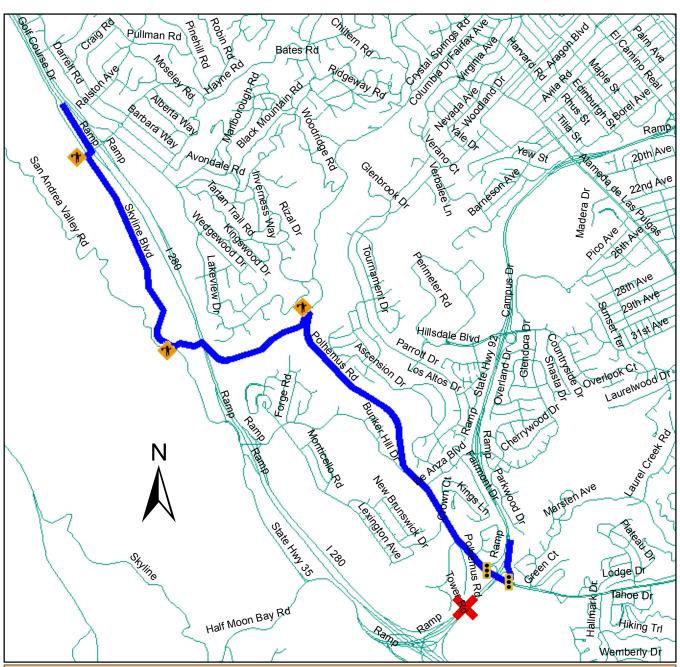
**INCIDENT LOCATION: Trousdale Dr and Hayne Dr** 

FREEWAY: 280 SOUTHBOUND



FREEWAY: 280 SOUTHBOUND INCIDENT LOCATION: Hayne Dr and Bunker Hill Rd. **ALTERNATIVE ROUTE:** Exit Hayne Rd; RT on Hayne; LT on Skyline Blvd; LT on Bunker Hill Dr; RT onto SB I-280 on-ramp. **ALTERNATIVE ROUTE JURISDICTIONS:** Legend HILLSBOROUGH SAN MATEO\* Fixed Camera Incident PTZ Camera CHANGEABLE MESSAGE SIGN (CMS) DEPLOYMENT: Alternate Route CM005-SF280 S/B N/OF 101 SEPARATION Trailblazer Ramp Meter CM027-SF280 S/B N/OF JOHN DALY BLVD Signal Possible Personnel Deployment Nearest EOC location (Address to be inserted)

PLAN 280-S-36-1



FREEWAY: 92 EASTBOUND

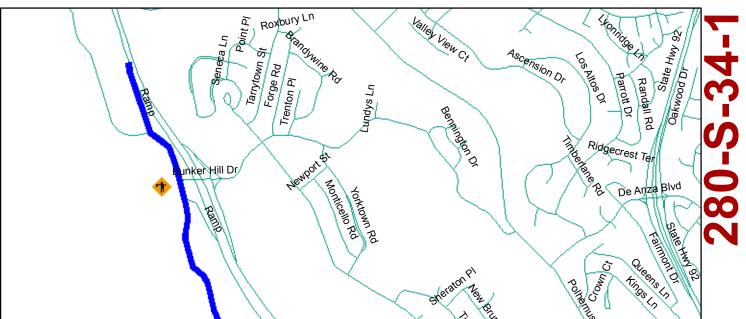
INCIDENT LOCATION: SB I-280/ Hayne Dr and Polhemus Rd

### **ALTERNATIVE ROUTE:**

Exit I-280 at Hayne Dr; RT on Hayne Dr; LT on Skyline Blvd; LT on Crystal Springs Rd; RT on Polhemus Rd; LT onto EB SR 92.

### **ALTERNATIVE ROUTE JURISDICTIONS:** Legend SAN MATEO HILLSBOROUGH Incident Fixed Camera **BELMONT\*** \*Adjacent Jurisdiction Potentially Impacted by Congestion Alternate Route PTZ Camera Ramp Meter CHANGEABLE MESSAGE SIGN (CMS) DEPLOYMENT: Trailblazer None Signal **EMERGENCY CONTACT INFORMATION ON BACK:** Possible Personnel Deployment (Click here for file)

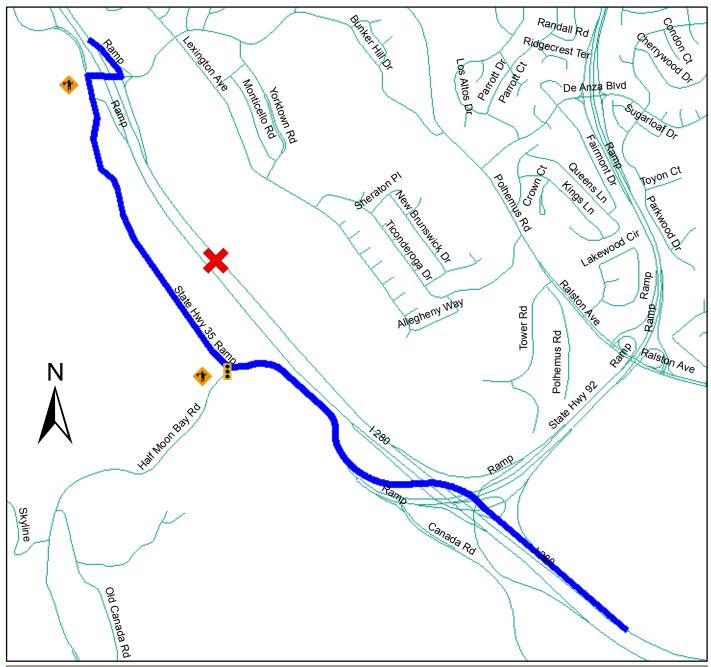
PLAN 280-S-36-2

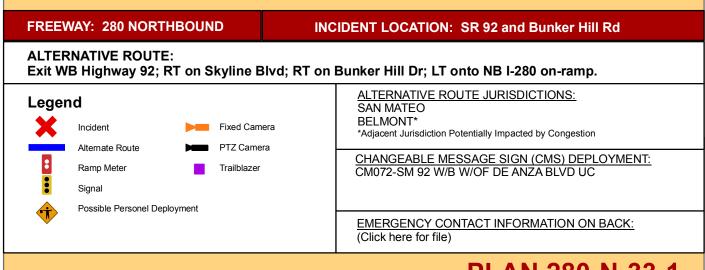


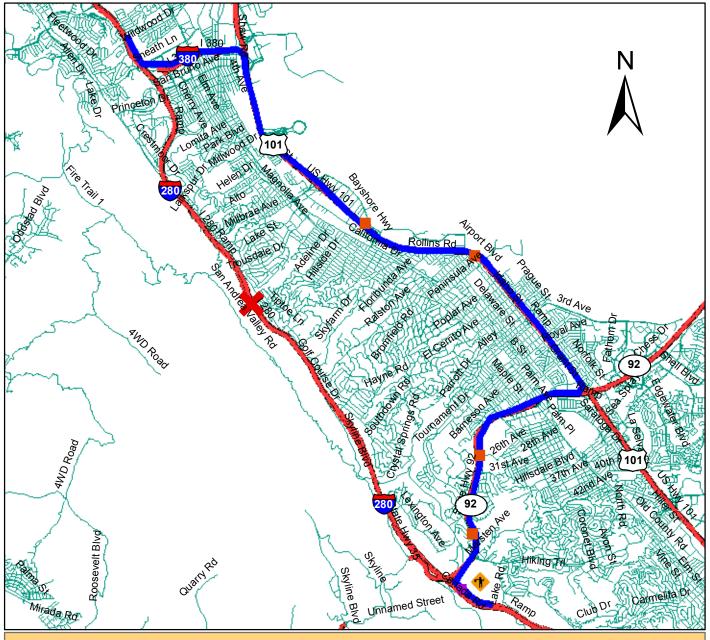


FREEWAY: 280 SOUTHBOUND **INCIDENT LOCATION: Bunker Hill Rd and SR 92 ALTERNATIVE ROUTE:** Exit State Hwy 35; LT on State Hwy 35r; LT on State Hwy 92; LT on Canada Rd; RT onto I-280 on-ramp. ALTERNATIVE ROUTE JURISDICTIONS: Legend SAN MATEO **BELMONT\*** Incident Fixed Camera \*Adjacent Jurisdiction Potentially Impacted by Congestion Alternate Route PTZ Camera CHANGEABLE MESSAGE SIGN (CMS) DEPLOYMENT: Trailblazer Ramp Meter CM005-SF280 S/B N/OF 101 SEPARATION CM027-SF280 S/B N/OF JOHN DALY BLVD Signal Possible Personnel Deployment EMERGENCY CONTACT INFORMATION ON BACK: (Click here for file)

PLAN 280-S-34-1







FREEWAY: 280 NORTHBOUND INCIDENT LOCATION: I-380 and SR 92

### **ALTERNATIVE ROUTE:**

Exit on 92 E from 280 N, Exit LT on 101 N, Exit LT on 380 W and join 280 N

## Legend Incident Alternate Route Ramp Meter Signal Possible Personnel Deployment Fixed Camera PTZ Camera CMS

ALTERNATIVE ROUTE JURISDICTIONS:
SAN MATEO
FOSTER CITY
MILLBRAE
SAN BRUNO

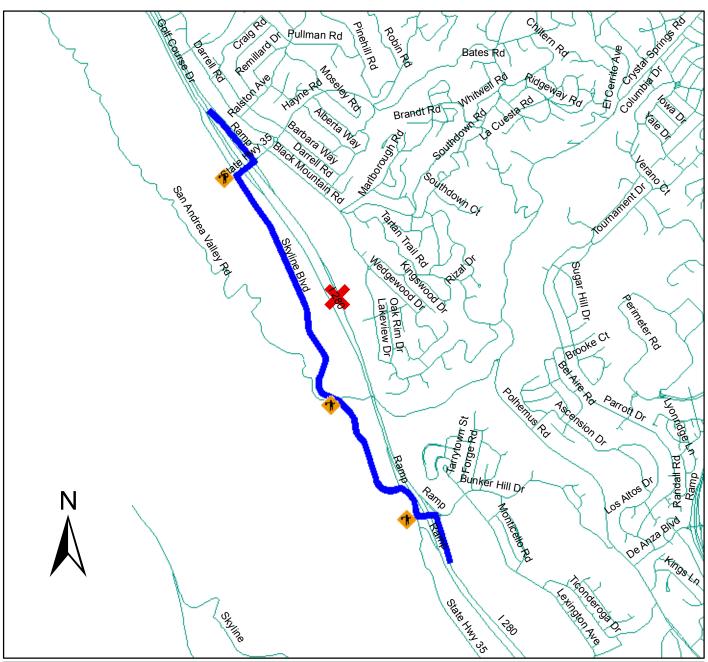
FOSTER CITY SAN BRUNO BURLINGAME

\*Adjacent Jurisdiction Potentially Impacted by Congestion

CHANGEABLE MESSAGE SIGN (CMS) DEPLOYMENT: CM072-SM 92 W/B W/OF DE ANZA BLVD UC CM040-SM 92 E/B E/of W. HILLSDALE BLVD CM013-SM101 S/B N/OF PENINSULA AVE OC CM012-SM101 N/B N/OF BROADWAY OC

EMERGENCY CONTACT INFORMATION ON BACK: (Click here for file)

PLAN 280-N-33-2





### **ALTERNATIVE ROUTE:**

Exit Bunker Hill Dr; LT on Bunker Hill Dr; RT on Skyline Blvd; RT on Hayne Rd; LT onto NB I-280 on-ramp.

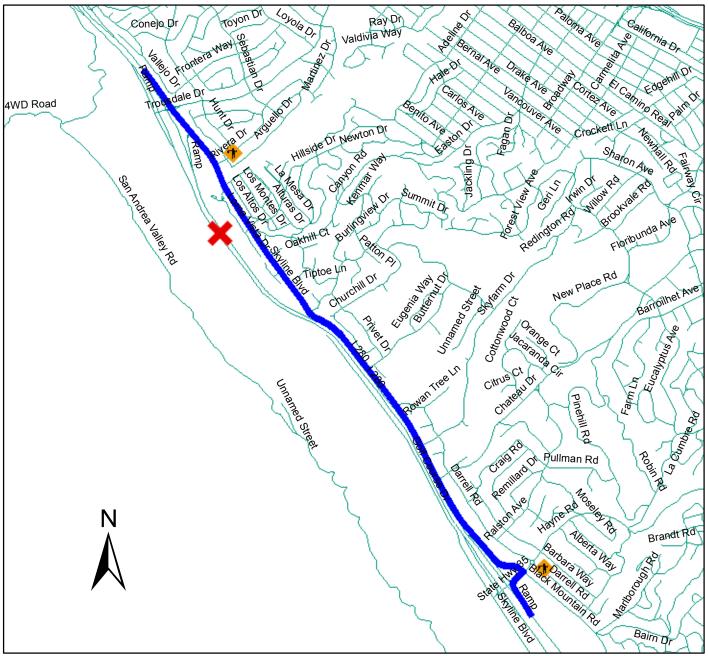
## Legend Incident Fixed Camera Alternate Route PTZ Camera Ramp Meter Trailblazer Signal Possible Personnel Deployment

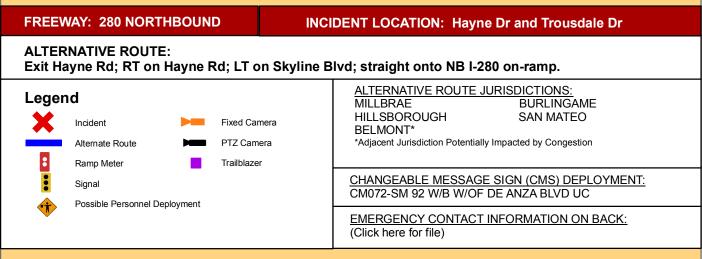
**ALTERNATIVE ROUTE JURISDICTIONS:** HILLSBOROUGH SAN MATEO \*Adjacent Jurisdiction Potentially Impacted by Congestion

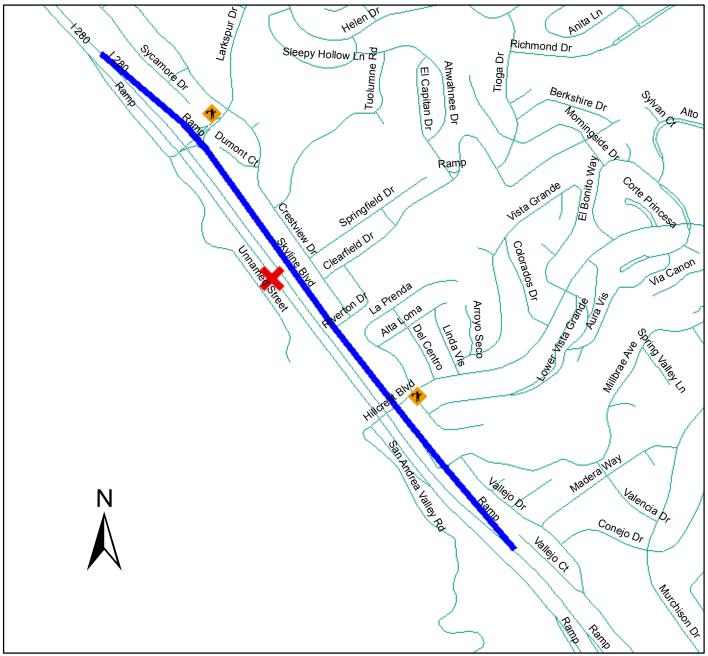
CHANGEABLE MESSAGE SIGN (CMS) DEPLOYMENT: CM072-SM 92 W/B W/OF DE ANZA BLVD UC

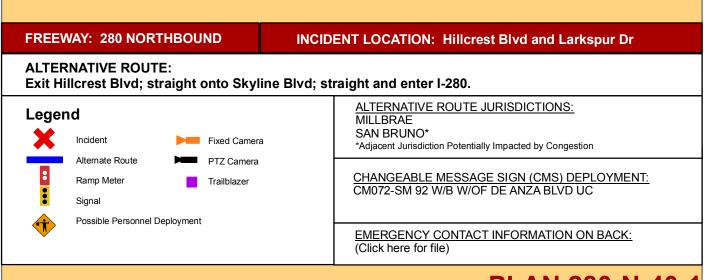
**EMERGENCY CONTACT INFORMATION ON BACK:** (Click here for file)

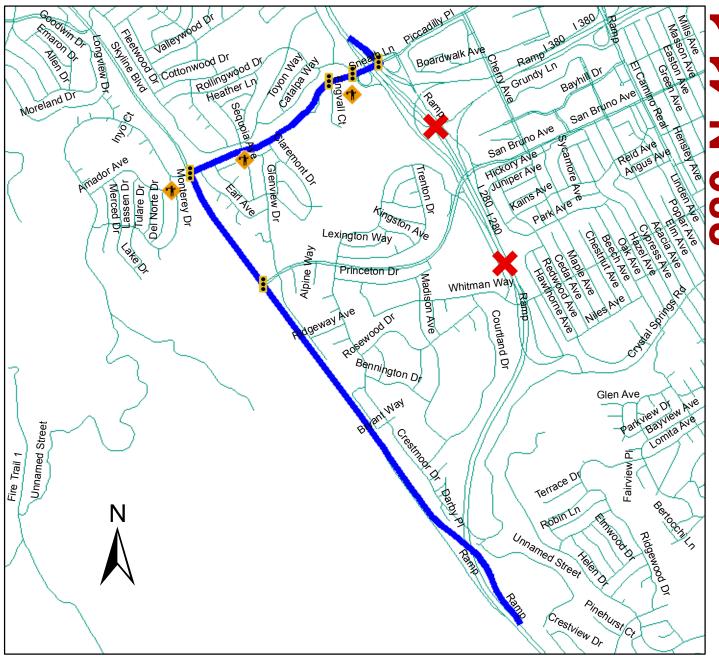
PLAN 280-N-34-1

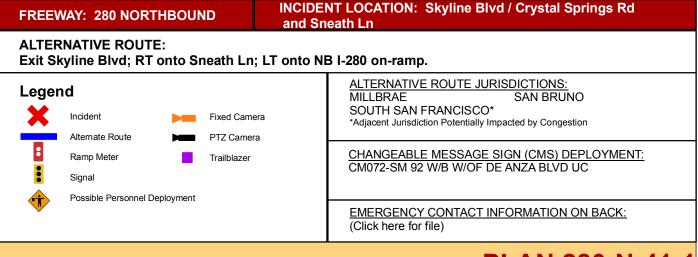


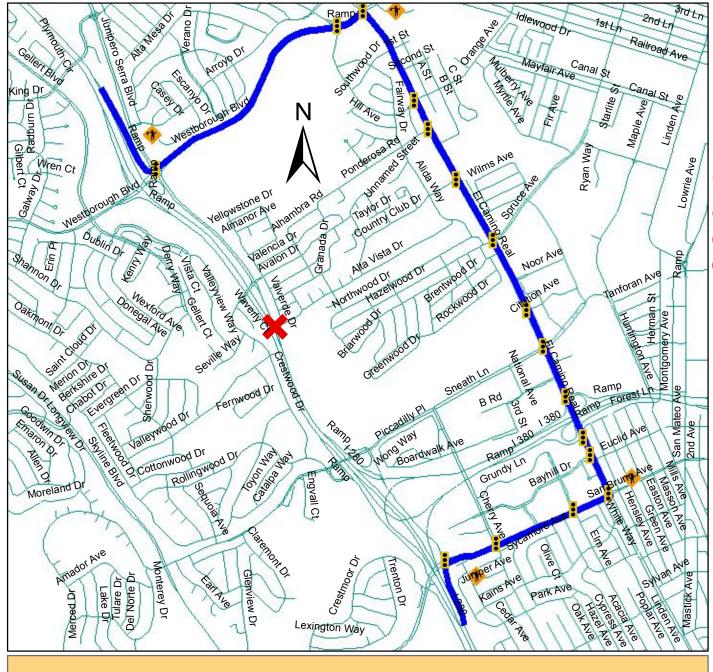












FREEWAY: 280 SOUTHBOUND INCIDENT LOCATION:

INCIDENT LOCATION: San Bruno Ave and Westborough Blvd

## **ALTERNATIVE ROUTE:**

Exit San Bruno Ave; RT onto San Bruno Ave; LT on El Camino Real; LT on Westborough Blvd; RT onto NB I-280 on-ramp.

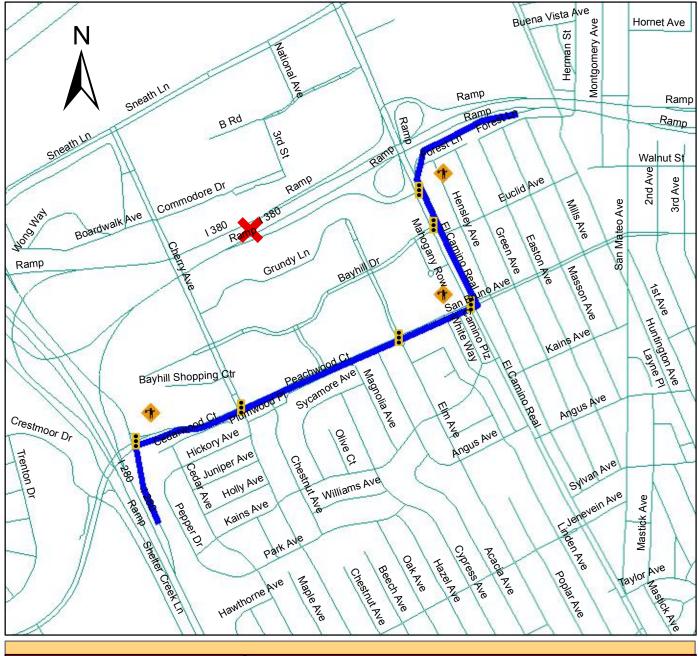
## Incident Alternate Route Ramp Meter Signal Possible Personnel Deployment Fixed Camera PTZ Camera Trailblazer

ALTERNATIVE ROUTE JURISDICTIONS: SOUTH SAN FRANCISCO SAN BRUNO DALY CITY\*

\*Adjacent Jurisdiction Potentially Impacted by Congestion

CHANGEABLE MESSAGE SIGN (CMS) DEPLOYMENT: CM072-SM 92 W/B W/OF DE ANZA BLVD UC

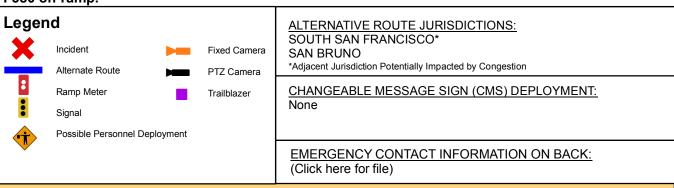
EMERGENCY CONTACT INFORMATION ON BACK: (Click here for file)



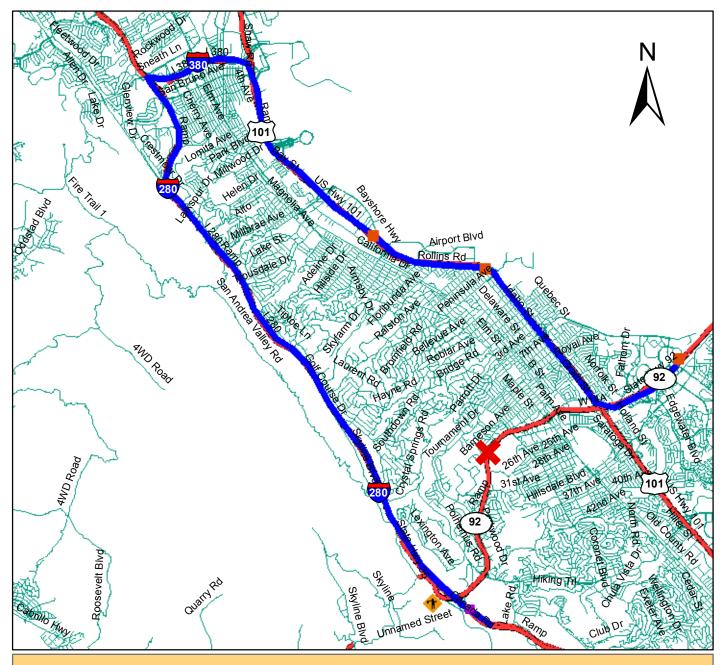
FREEWAY: 280 Northbound to 380 Eastbound INCIDENT LOCATION: I-280 N to I-380 EB ramp through I-380 E at El Camino Real

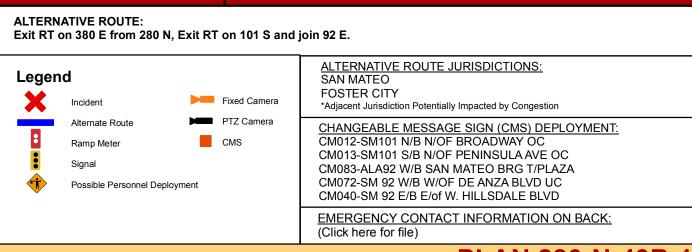
ALTERNATIVE ROUTE:

Exit NB I-280/ San Bruno Avenue; RT on San Bruno Ave; LT on El Camino Real; RT onto EB I-380 on-ramp.



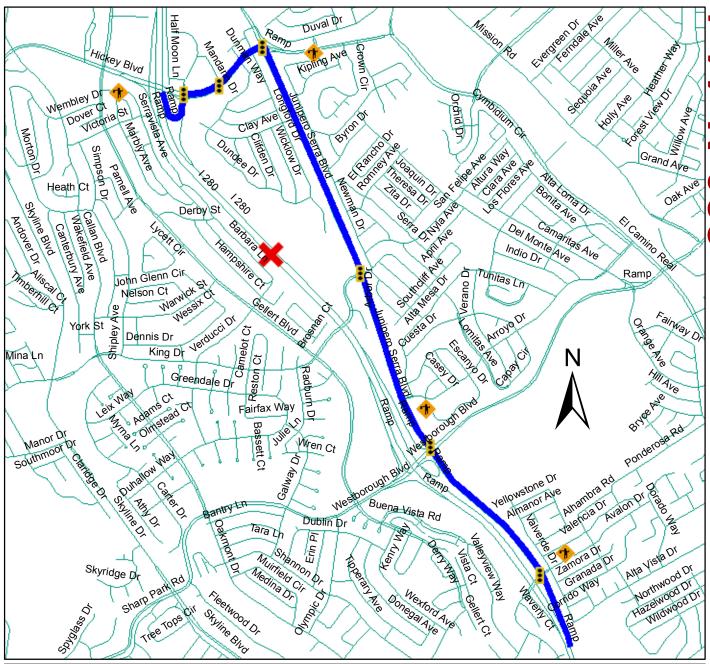
PLAN 280-N-43A-2

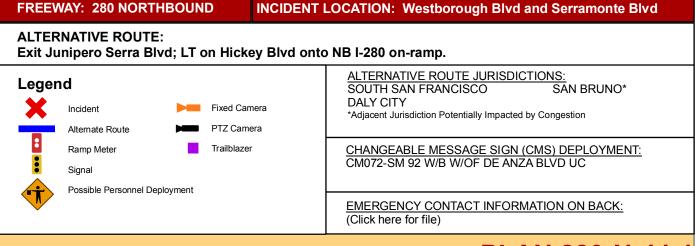


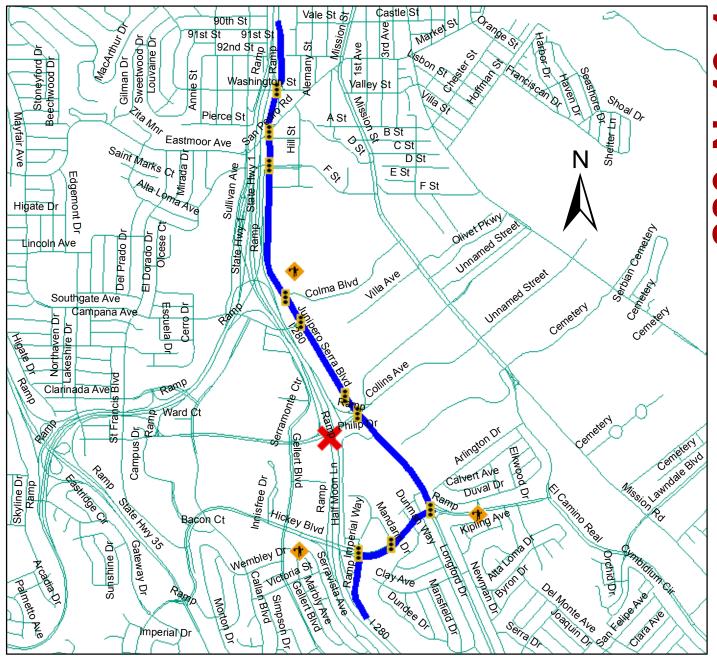


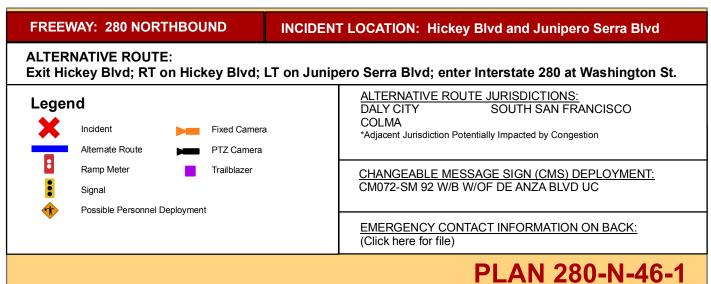
**INCIDENT LOCATION: US 101 and I-280** 

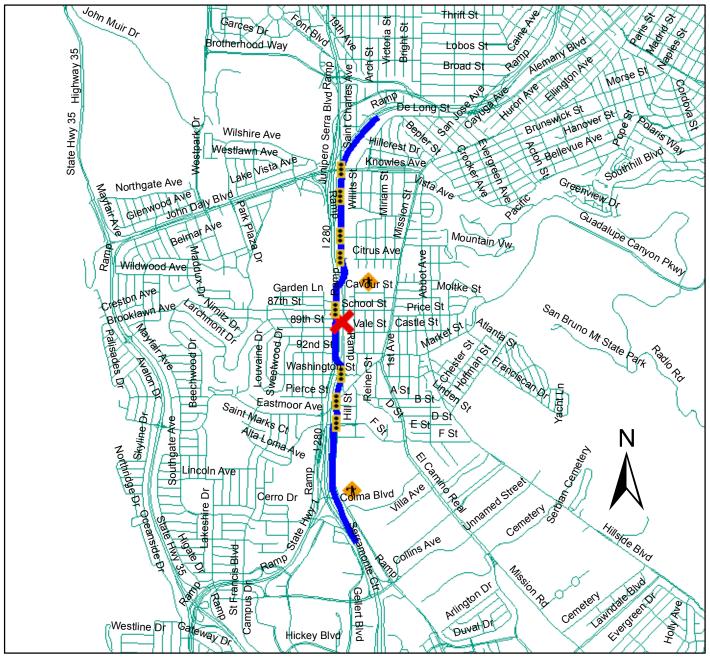
FREEWAY: 280 NORTHBOUND

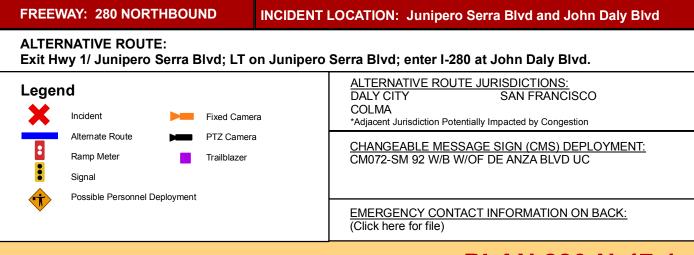


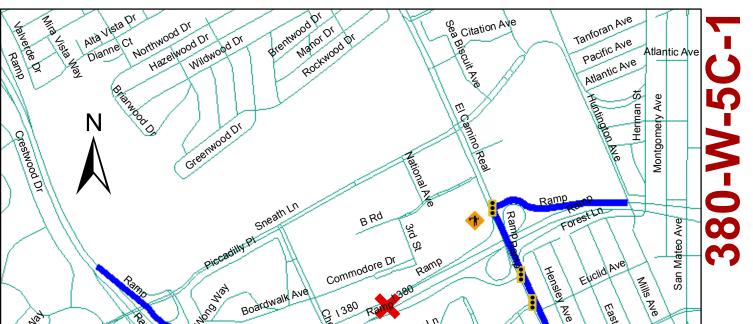






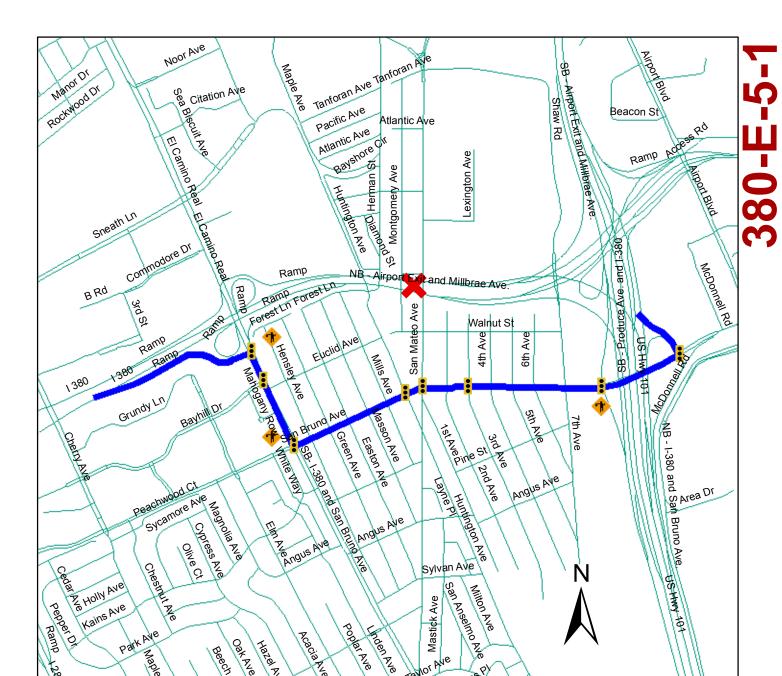


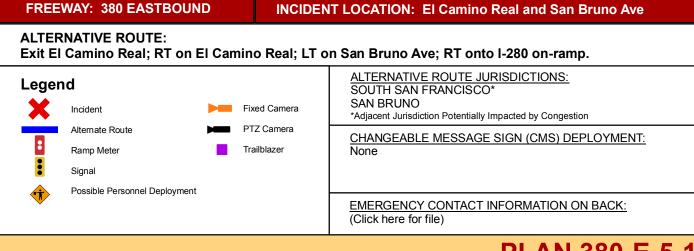


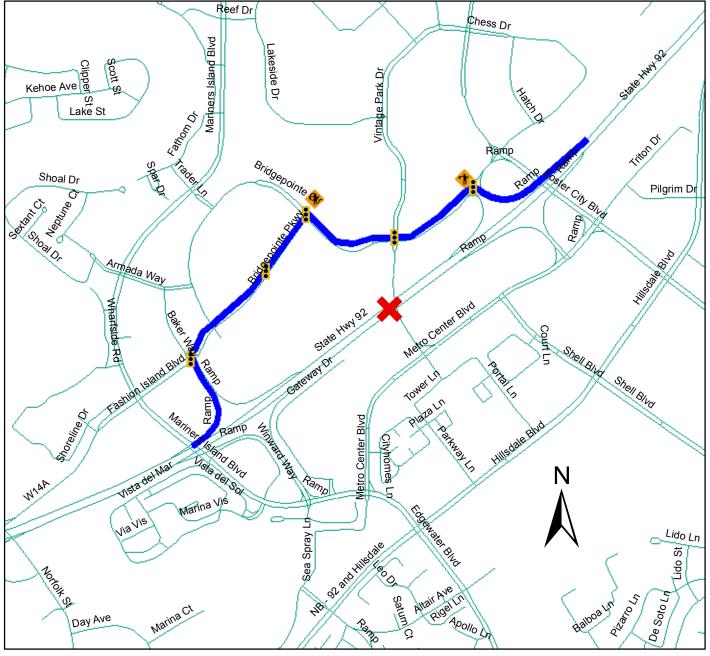


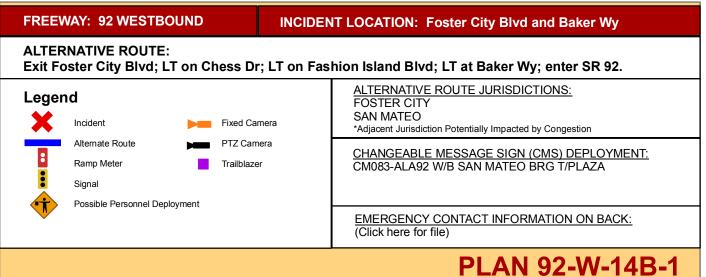


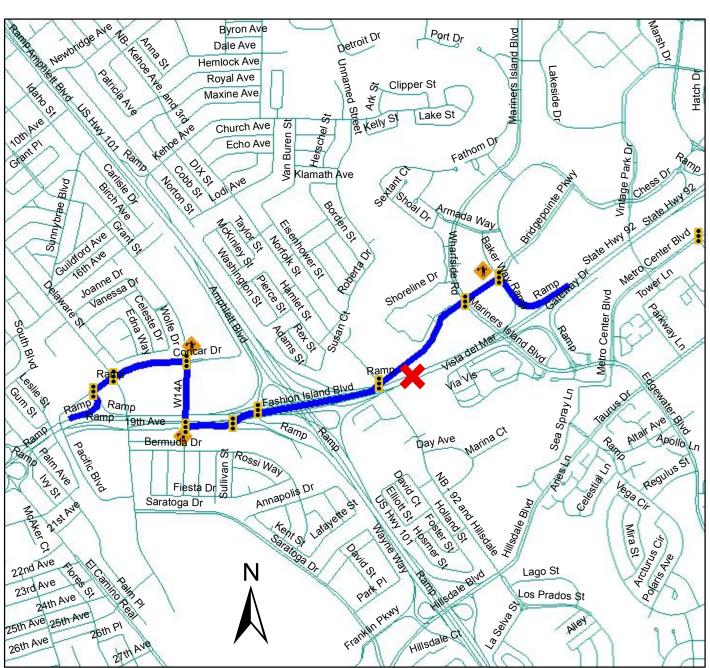


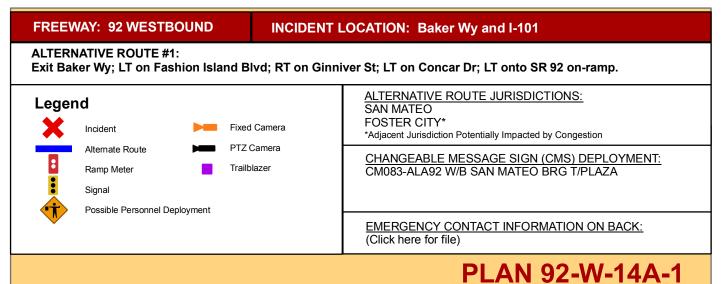


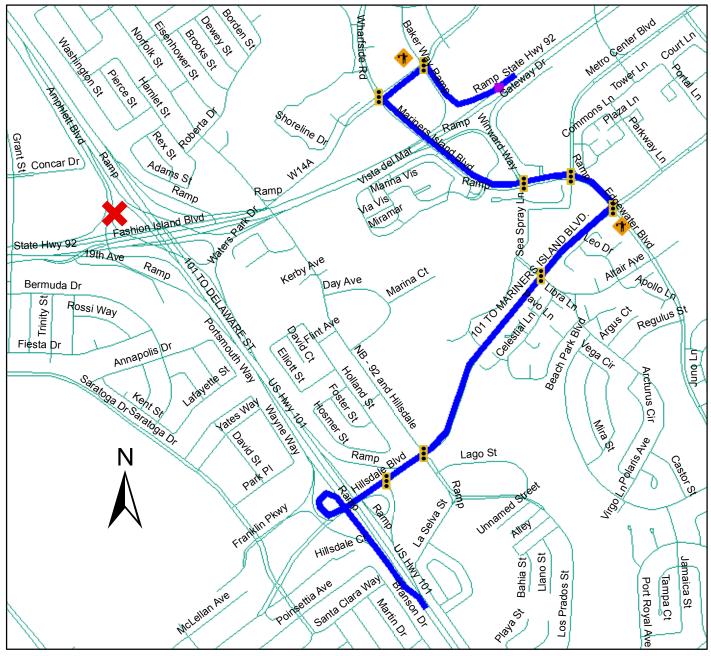


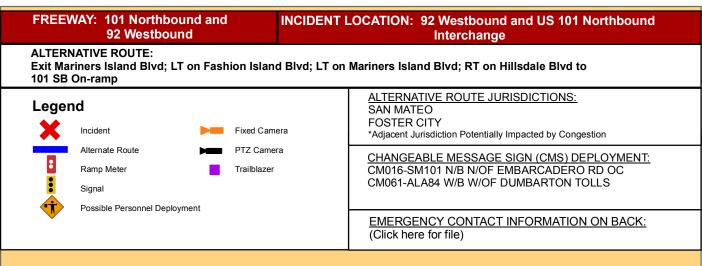


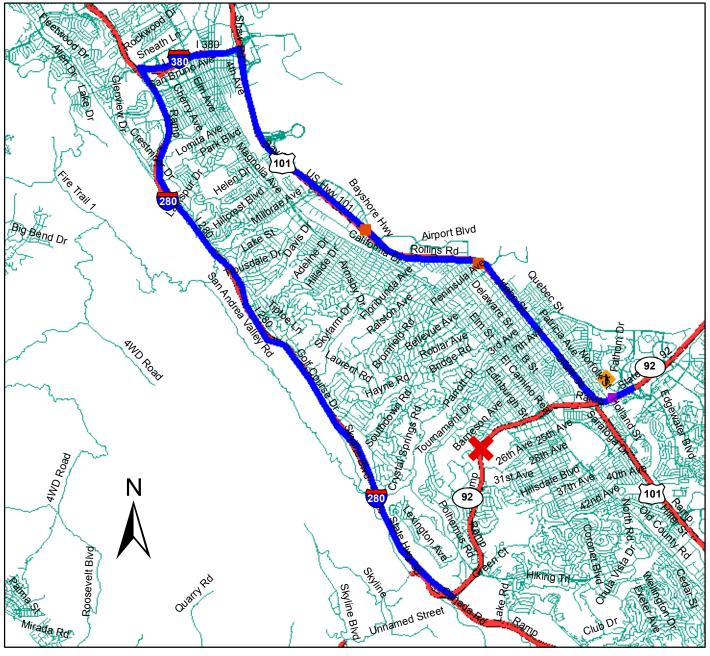


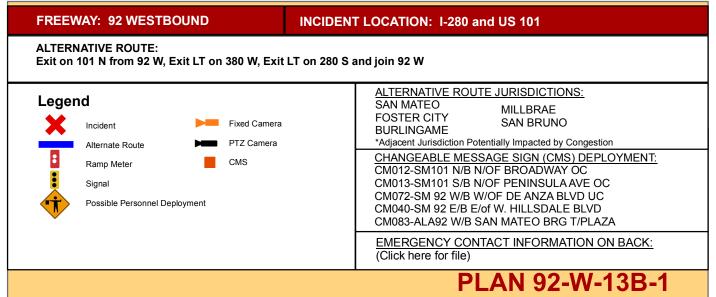


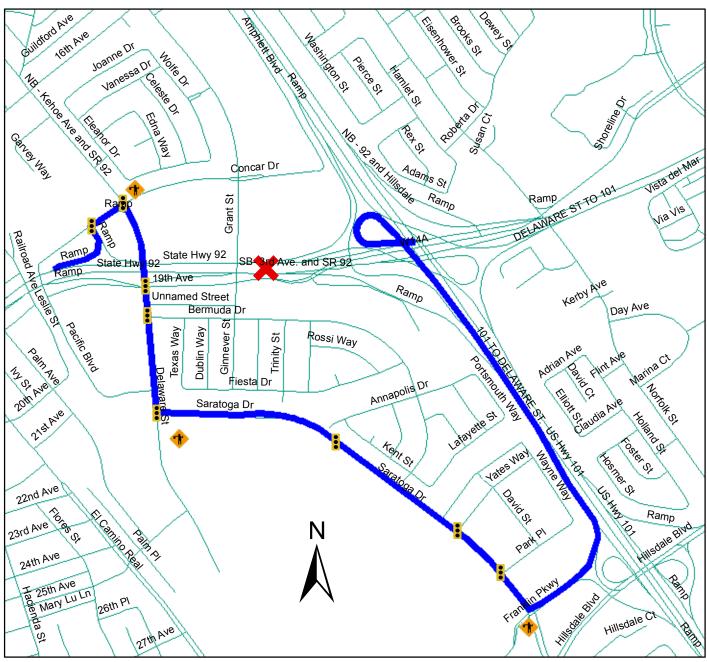


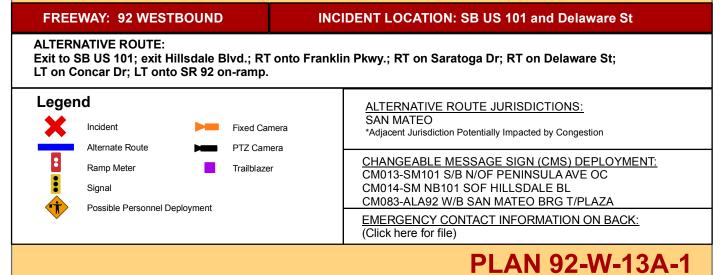




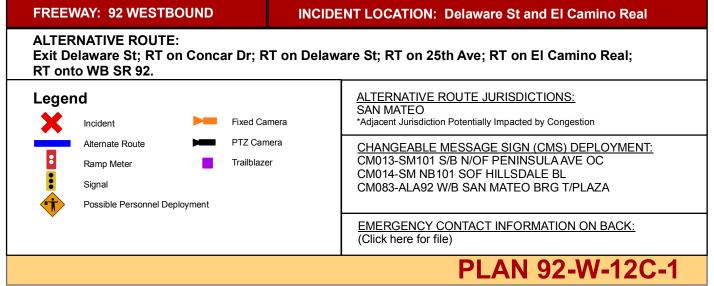


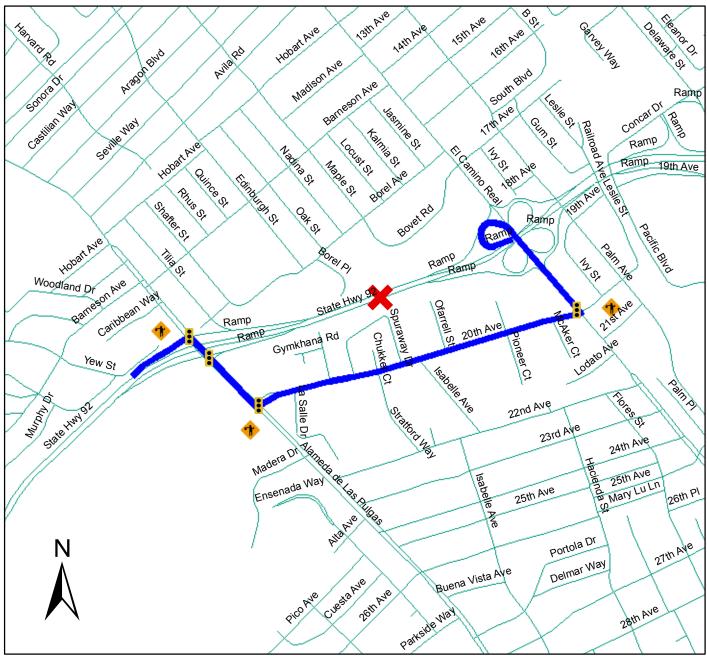


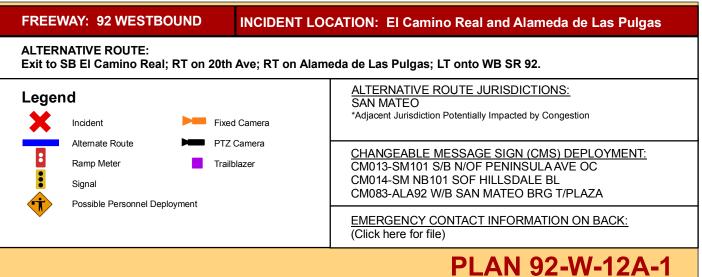


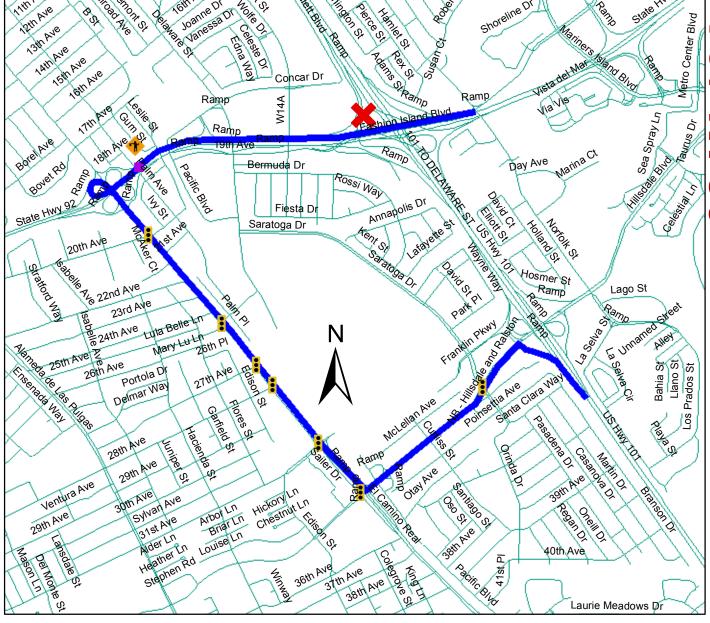


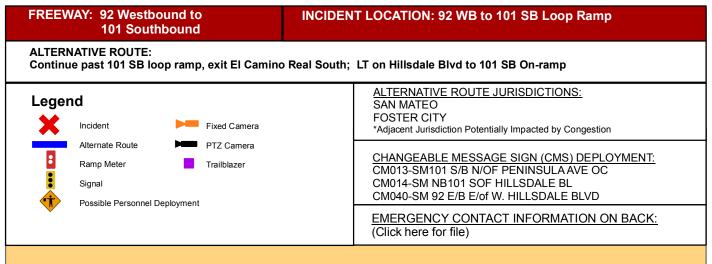


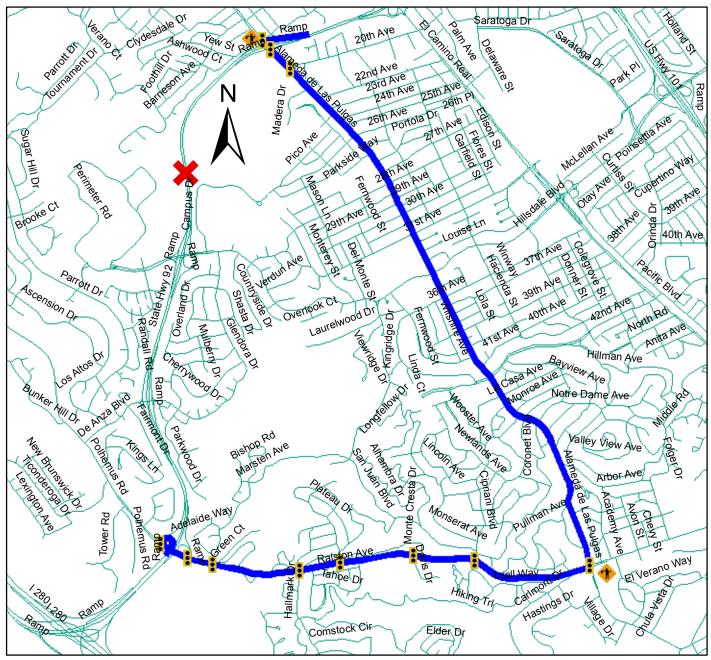








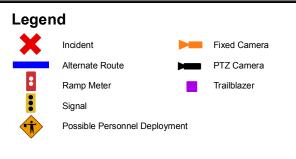




FREEWAY: 92 WESTBOUND INCIDENT LOCATION: Alameda de Las Pulgas and Raiston Ave

## **ALTERNATIVE ROUTE:**

Exit Alameda de Las Pulgas; LT on Alameda de Las Pulgas; RT on Ralston Ave; RT onto WB SR 92 on-ramp.

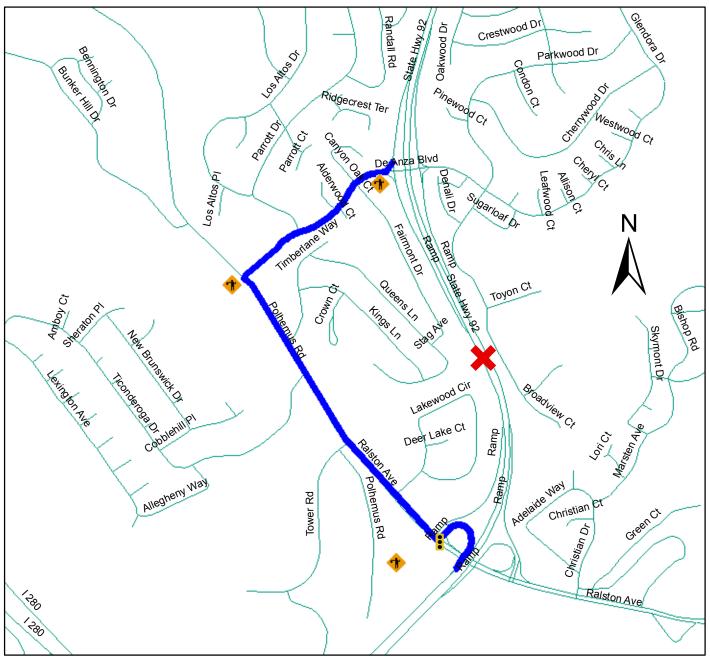


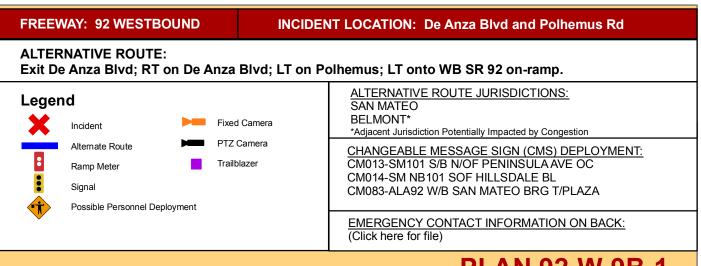
ALTERNATIVE ROUTE JURISDICTIONS:
SAN MATEO
BELMONT
HILLSBOROUGH\*
\*Adjacent Jurisdiction Potentially Impacted by Congestion

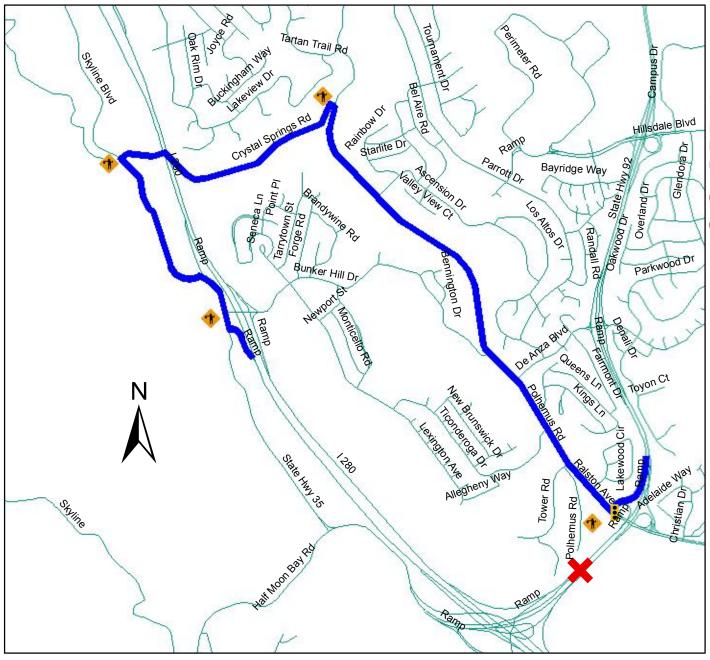
CHANGEABLE MESSAGE SIGN (CMS) DEPLOYMENT: CM013-SM101 S/B N/OF PENINSULA AVE OC CM014-SM NB101 SOF HILLSDALE BL CM083-ALA92 W/B SAN MATEO BRG T/PLAZA

EMERGENCY CONTACT INFORMATION ON BACK: (Click here for file)

PLAN 92-W-11-







ALTERNATIVE ROUTE:
Before 280 SB ramp, exit Ralston Ave / Polhemus Rd; RT on Polhemus Rd; LT on Crystal Springs Rd; LT on Skyline Blvd; LT onto SB I-280 on-ramp.

Legend
Incident

ALTERNATIVE ROUTE JURISDICTIONS:
SAN MATEO
HILLSBOROUGH\*

PTZ Camera

Trailblazer

FREEWAY: 92 WB to 280 SB

Alternate Route

Possible Personnel Deployment

Ramp Meter

Signal

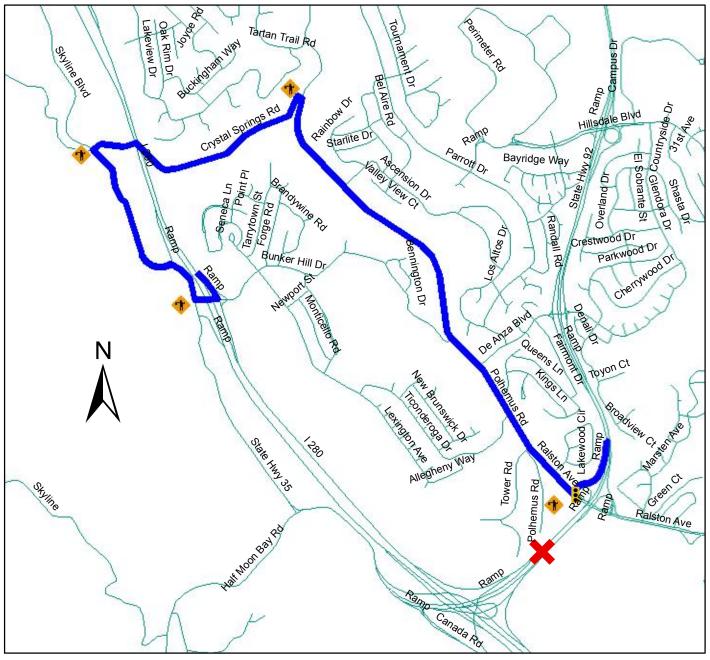
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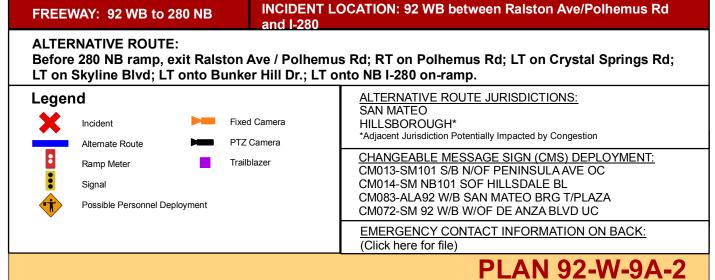
\*Adjacent Jurisdiction Potentially Impacted by Congestion

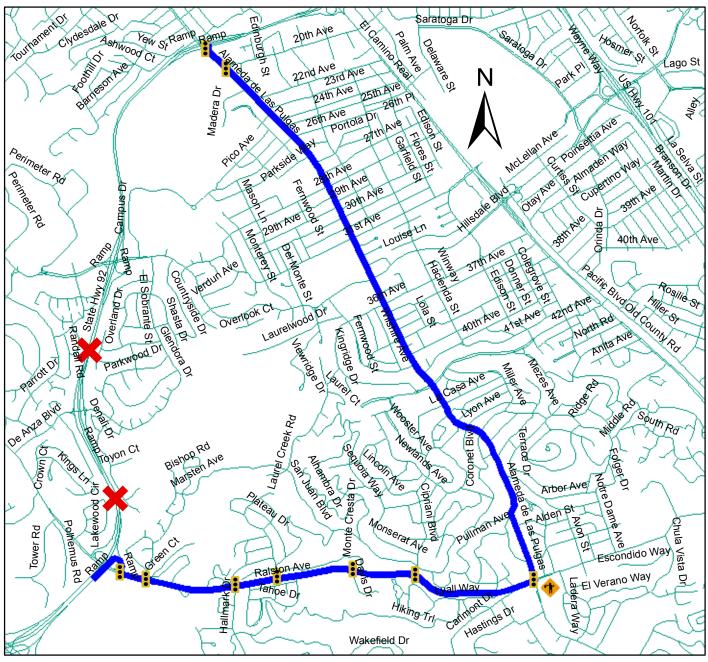
INCIDENT LOCATION: 92 WB between Raiston Ave/Polhemus Rd

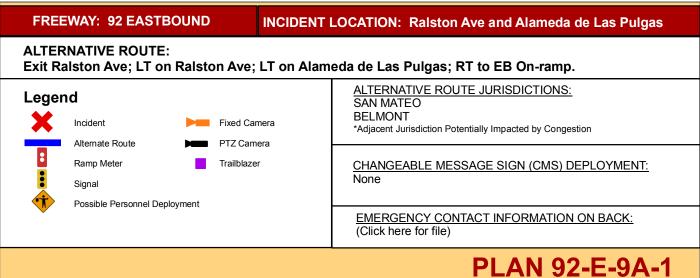
EMERGENCY CONTACT INFORMATION ON BACK: (Click here for file)

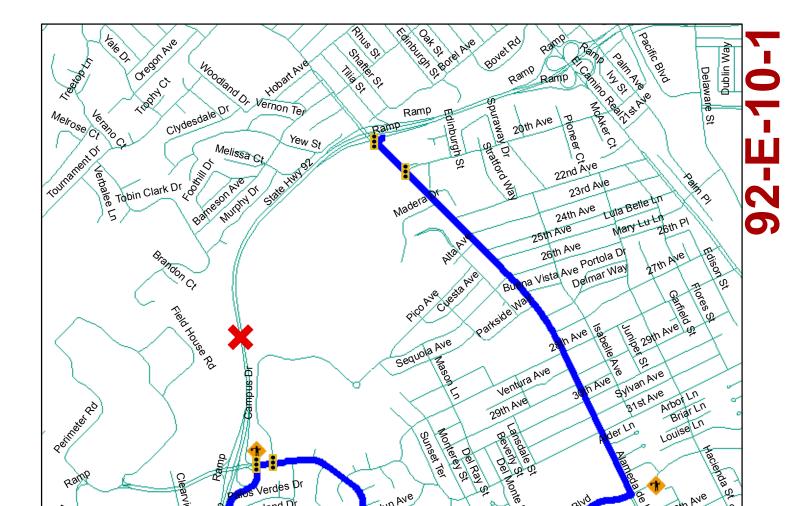
**PLAN 92-W-9A-1** 

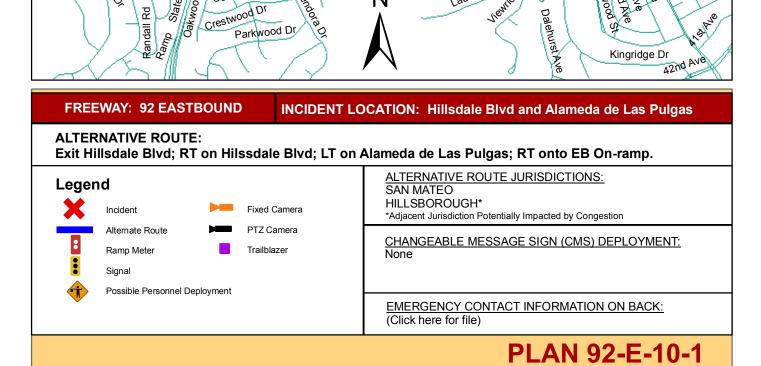












erdun Ave

Caxton Ct

Overlook

Laurelwood Dr

Country-ide Dr

Shasta Df

Glendora Dr

Clearview

92

State Hwy

Gonidae

路

Randall

LOS ALTOS DI

Verdes Dr

Overland Dr

Woodberry Ave

Parkwood Dr

Cedarwood Dr Crestwood Dr

Rail

Parrott Dr

37th AVE

STANO

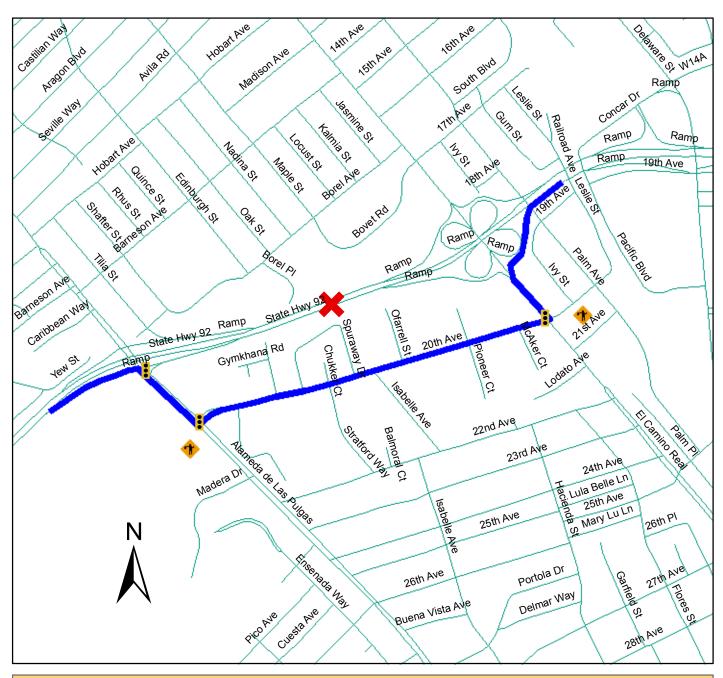
Wilshire Ave

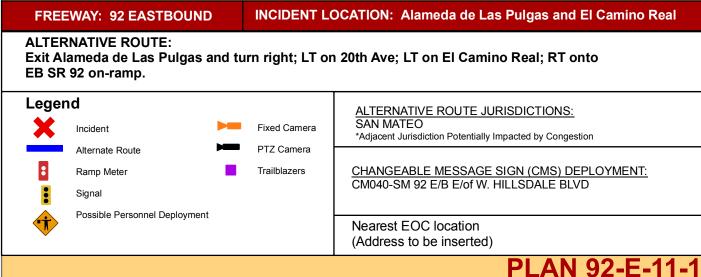
38th Ave

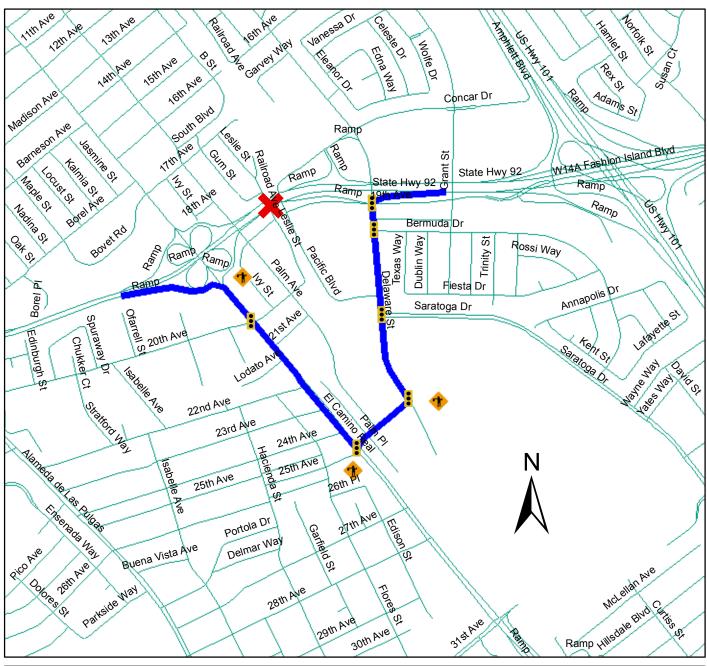
30th Ave on

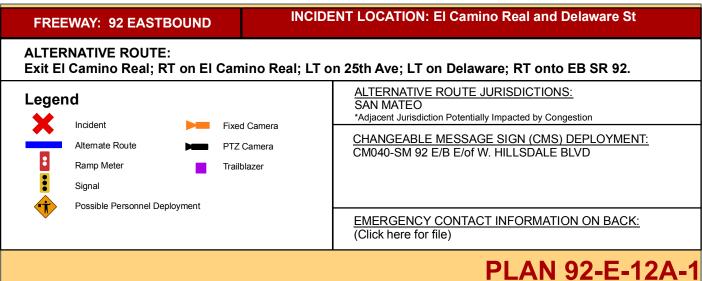
Southwood Ave Kenwood Ave

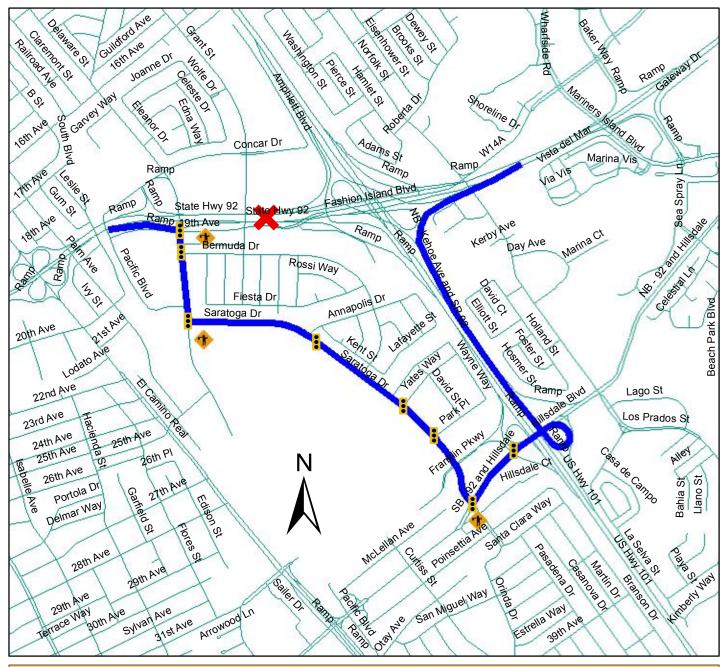
Fernwood St

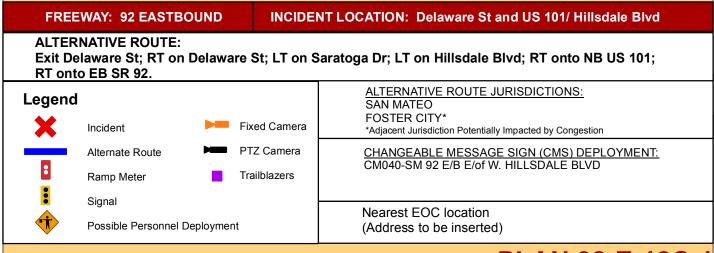


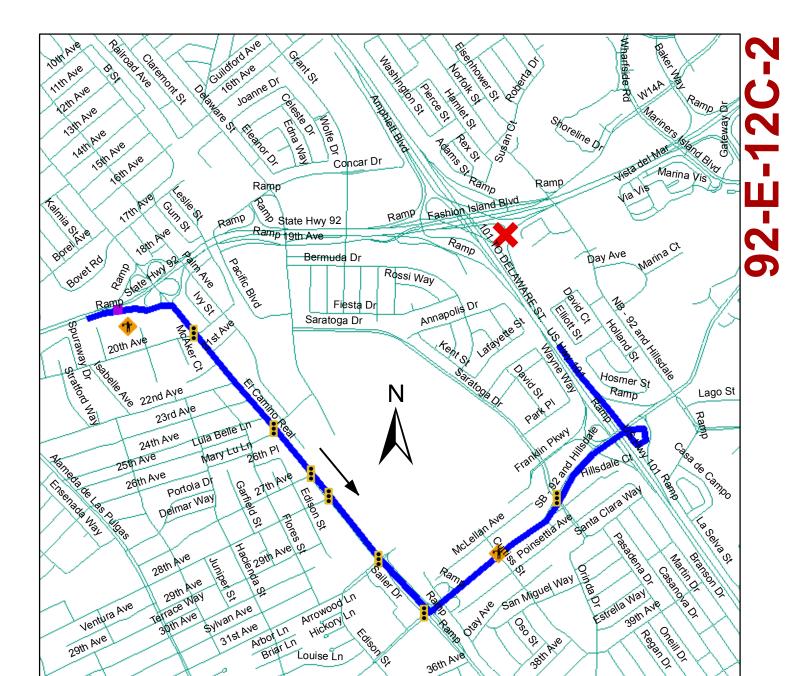


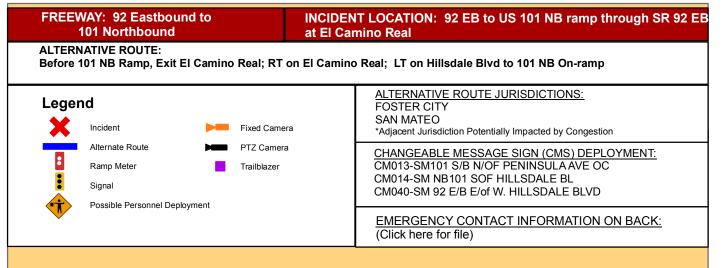








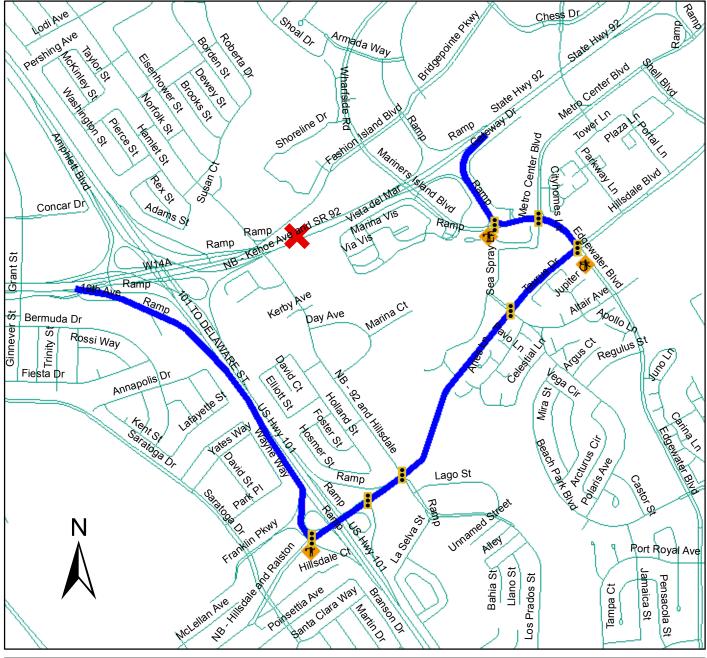


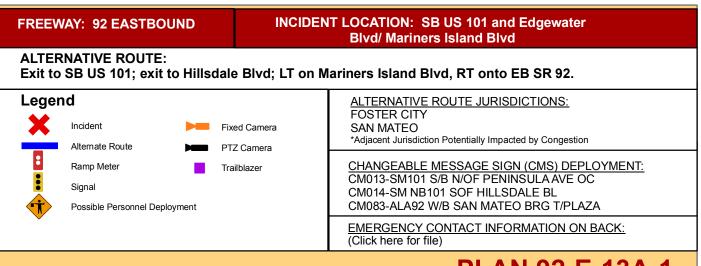


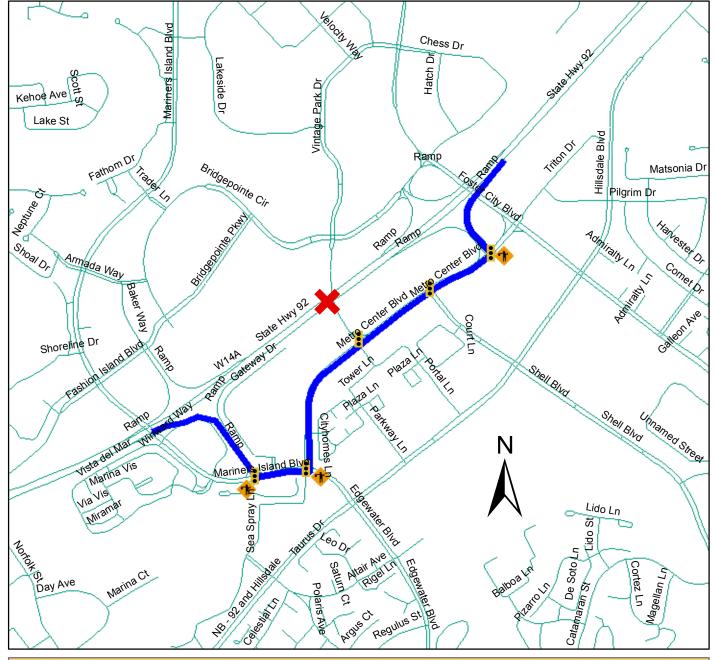
Louise Ln

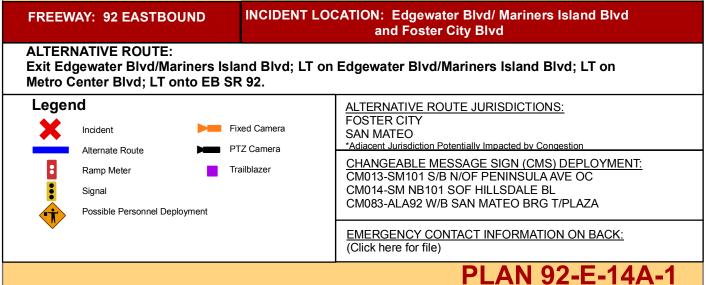
36th Ave

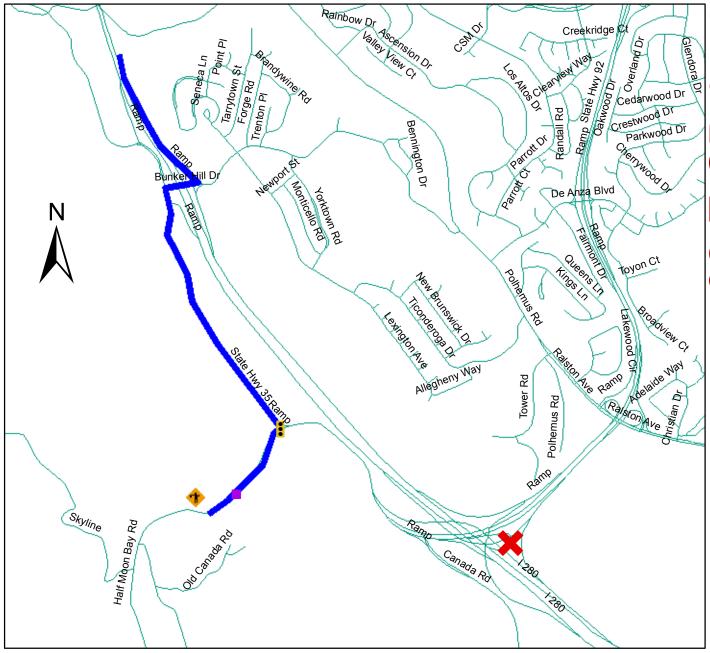
**PLAN 92-E-12C-2** 

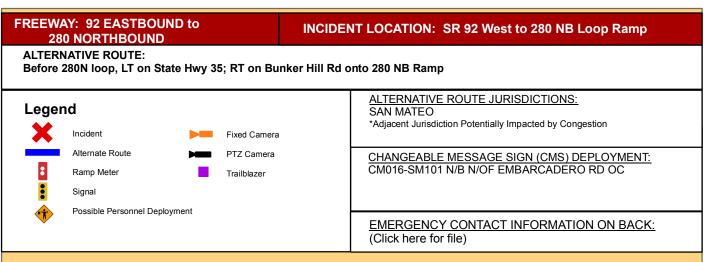












**PLAN 92-E-SR 35-1**